

AUSTRALIA'S HOTTEST COMPUTER MAGAZINE

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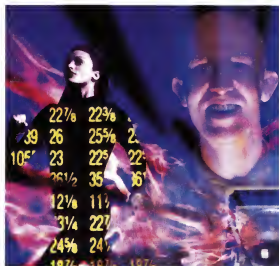
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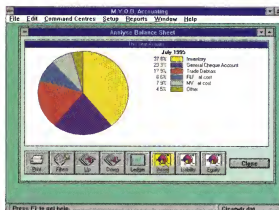
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Upgrades and more Web developments

This year may well be remembered as the year of the W: Windows 95 and the World Wide Web are two of the hottest topics to hit the PC arena for a long time. *PC World* is covering developments in both of these as they arise.

Inside this issue you will find yet another series of articles about Windows 95. In last month's review we covered all the new features, gave you a rundown on the Windows 95 interface, tested Plug and Play and looked at the pros and cons of upgrading for business users. Since it is likely many of you will be installing the upgrade this month, we have found some hot tips to help you out (see *Tips for a trouble-free upgrade*).

Once you have Windows 95 up and running, one of the first things you will want to do is find a colour scheme that suits, and fine tune the interface to your requirements (see *How to customise your desktop*). If you want to delve deeper into managing Shortcuts, the Start button and the taskbar, check out *Changing the way things work*.

Then you will be looking for some real 32-bit business applications to try. At the time of going to press, we had received late beta versions of applications for Windows 95 from Symantec, Micrografx, Lotus and Microsoft. Symantec's Norton Utilities and Norton Navigator are given a First Look this month since they are handy tools for upgraders — and the software we tested was close to being finalised.

Microsoft's Office 95 is also given a First Look. I have been using the beta version and I'm impressed with enhancements to the Help system, where you can ask a plain English question such as "How do I print sideways?"

But you will have to wait until we have final versions of all these applications so we can do full-scale reviews. Look for these in *PC World* over the next few months.

The other hot topic is the Internet, and you will find increased coverage of on-line services beginning this month with a new section called *au.world*. It covers issues arising from the Internet's popularity and will provide readers with hot topics, hot Web sites to visit, and it will keep you up to date with other on-line services such as the Microsoft Network and CompuServe. This section also appears in other IDG publications (with modifications to suit each readership) including *Computerworld*, *Network World* and *Computer Living*.

You can find *Australian PC World* at IDG Communication's home page on the Web at <http://www.idg.com.au/idg>. If you have any comments about the home page, comments about Windows 95, or want to submit a reader's letter for publication in the magazine, send an e-mail to pcworld@idg.com.au.

— Robert Thirlwell
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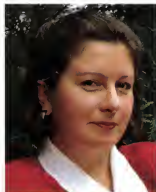
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OEM/ODM Enquiries Welcome

Osborne's quest for market share



By Beverley Head

In 1987 John Linton and Stanley Falinski sat together and drafted a 12 year plan that would deliver them an Australian owned personal computer maker with \$1 billion worth of revenues by 1999.

In July this year they were instead forced to call in a voluntary administrator to the company, Osborne Computer Corp, which was labouring under the weight of more than \$42 million worth of debts. Among the creditors US chip maker Micronics was owed \$17 million, and the Commonwealth Bank was owed a further \$7 million.

A week later Singaporean PC company IPC announced it was shutting more than half its shops in this country and sacking 60 of its 400 staff. In 1993 IPC had outlined its plans to invest \$21 million setting up 75 stores across Australia.

July was not a good month for the PC industry. Both companies had gone after market share at the expense of margins.

IPC's manager of Australasia, Patrick Ng, admitted that IPC had been running with an impossibly thin 10 per cent margin. His ambition was to ramp that up to about 18 per cent.

But even an 18 per cent margin had failed to sustain Osborne, for that was the margin which the voluntary administrator, John Star, uncovered when he went in to tackle Osborne's debt mountain.

By the time this article is published the fate of both companies will be more clear. What is abundantly clear already is that neither company had the volumes necessary to allow them to continue offering machines at such a low margin.

For a company like Compaq, with an annual run rate of 6 million machines, and quarterly revenues of \$US3 billion plus, the volume model has a chance. For a company like Osborne, with a run rate of less than 100,000, a huge and climbing debt burden, a four year profit/loss seesaw, and a couple of hundred million dollars annual revenue, the volume model was a poor choice.

And like IPC the company had run its own retail stores, an expensive mode of operation. In addition, although Osborne and IPC shops were competing with the likes of Harvey Norman at the price level, they were not able to offer Harvey Norman's range, both concentrating mainly on their own brand. It compounded the problem. The tragedy, in Osborne's case, is that this was the company which had set the pricing, warranty and service agenda in this country. It had forced the multinationals to stop treating Australia like a colonial backwater.

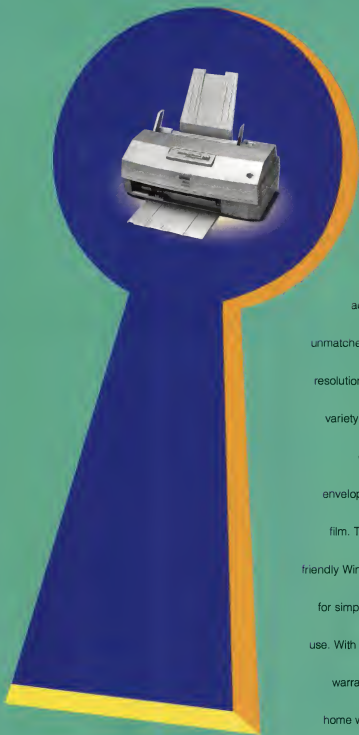
The deals the multinationals were offering in New York's Times Square now had to be matched by the deals they offered in Australia. Having achieved that though, Osborne had made life even more difficult for itself.

John Star, of Star Dean-Willcocks, who steered the company through its period of administration, told a meeting of creditors shortly after his appointment that Osborne was "a very good company; the business is very good, it has been badly managed". Having achieved number one status as a supplier of desktop PCs in Australia, Osborne seemed ready to

Continued on page 8

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But they are also facing a sustained fall in the price of the basic commodity they are selling — processing power

pay any price to maintain that position. Ultimately the price proved to be the business itself.

Osborne, IPC and indeed all personal computer makers had been (and still are) enjoying greater demand for product than ever before. International analyst Dataquest points to this as being a bumper year for PC sales.

But they are also facing a sus-

tained fall in the price of the basic commodity they are selling — processing power.

Dataquest claims that in 1988 a Mip of PC power cost \$2,800. Last year that had plunged to \$140 a Mip. Next year it estimates that will have plunged to around \$30. Despite the additional demand for power at the desktop which will be created by the advent of new

applications to run under Windows 95, it will not be sufficient in itself to maintain PC profits unless companies have machine shipments running to millions. Besides the multinational volume companies those which prosper will be the PC makers developing a sound relationship with their customers, offering a level of service and support which creates loyalty, and a customer base willing to pay a premium for that which will in turn sustain the supplier.

Osborne and IPC's woes were a clear signal that the discount dogs need to be chained.

• **Beverly Head is the information technology editor of the Australian Financial Review**

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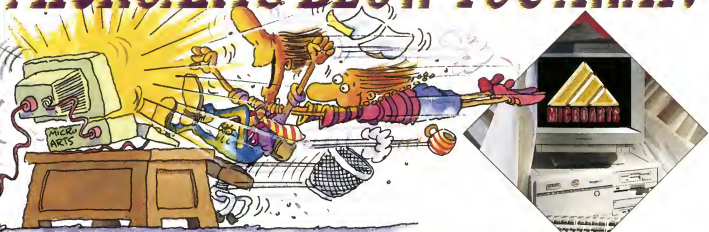
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E & OE

Osborne: What's next?



By Doug Ruttan

The recent financial problems at Australia's largest locally owned PC manufacturer, Osborne Computer, raises some interesting issues. As you know, the ownership of this company recently passed into the hands of the US PC maker Gateway Computers as a result of a scheme of arrangement put in place by the appointed financial administrator.

So as the biggest seller of desktop computers in Australia virtually disappeared in a matter of weeks, I thought I would share some thoughts with you as to what could have been done and what impact this may have on our happy PC community.

Firstly, whenever something like this happens there is a cry for the government to step in and find a solution, thereby keeping the local company in Australian hands.

Personally, I am not in favour of this approach for two reasons. Firstly, Western democratic governments have shown themselves to be, on the whole, too slow and inept at trying to manage businesses that operate in an intensely competitive market. For example, the US Department of Justice tried for years to regulate some of the dominant activities of IBM only to find that the market sorted it out for them when the PC phenomenon hit in the eighties.

I would suggest that in Australia our government could do a lot more for our local manufacturers by giving them better tax breaks, reducing export costs and strengthening local content rules. Also massive incentives for management training and R&D links with our various tertiary institutions would be of great help.

To give you an example, I was involved with a Prices Surveillance Board hearing and research that showed that the cost of distributing the same software product in Australia was 30 per cent more than in the US due to transport costs, market size and government charges. In my view it is this 30 per cent that the government could fix.

The second reason why governments should be very careful about playing in and regulating the IT industry is that the speed of technological change has so far sorted out the well intentional from the capable.

Another issue related to Osborne's collapse is the number of additional hardware and software features that will soon be included with the average PC.

Obviously, Gateway will wish to market its computers successfully. I feel it needs to follow Osborne's strategy of giving real value for money. CD-ROM drives and sound cards are now commonplace with the average personal computer and soon you will see fax-modems and network cards built-in as well.

However, it is in the operating system where you will soon see some significant extra network and interconnect features included as the various vendors fight for your custom.

Windows 95 will lead the way in this features war, with communications software built-in for the On Australia network as well as Microsoft Money for home banking.

Also Microsoft has told software

Continued page 16



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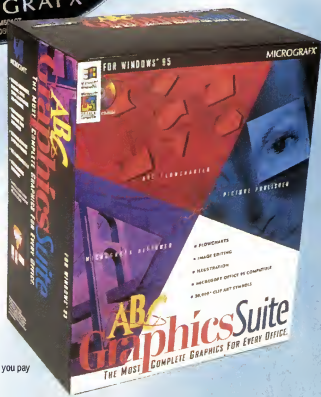
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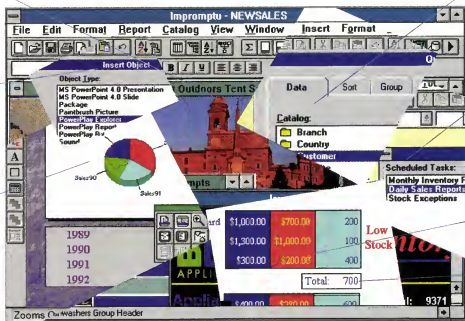
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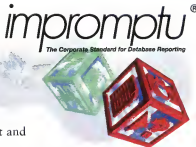
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Microsoft will be forgiven



By Stewart Alsop

Where will we be in a year? (I've mentioned previously that I don't like forecast columns, but that's mainly because they are all always written around the new year. So you read them all at once and end up even more confused. So now I'm writing one when it's completely unexpected, so you all will read only mine and believe everything I say.)

- We will be using Windows 95. As many as 85 per cent of the people who use Intel PCs may still be using Windows 3.x or DOS or OS/2 in late 1996. But the Windows users who either buy PCs or write about them will be using Windows 95. And that means we will have completely forgotten about Windows 3.x and DOS. (Some of us will keep on using the MacOS or OS/2, suffering in relative silence.)

- We will not be using Windows NT. By "we", I mean the press and the majority of people who manage PC-based information systems. It's fashionable these days to believe, somewhat wishfully, that we will all migrate to Windows NT, being dissatisfied with the flaws in Windows 95. But the flaws in DOS did not motivate us to move to Unix. The flaws in Windows 3.x did not motivate (most of) us to move to OS/2.

It's not flaws that motivate people to use a particular operating system. In fact, it is not even the features of an operating system that motivate people to use a system. It is the available applications and the

general support and momentum behind an operating system that get us to adopt a system.

- The typical desktop PC will be shipped with a 150MHz microprocessor, 16Mb of RAM and a 500Mb hard disk. That probably means "we" will be using even better computers with more memory, more disk space, faster processors, and all the bells and whistles — perhaps a video camera and multimedia and the ability to make video phone calls?

- We will all have direct connections to the Internet at work. Given the imperative behind the Internet, at least for WAN communications, if not for electronic commerce, I'm willing to bet that nearly 100 per cent of the "we" I defined above will be connected directly to the Internet at work in the next year.

And even if video telephony does not become a common feature of our daily work life, having such high availability of direct Internet connections will have a profound effect on our work lives. We can skip right past the archaic notion of modems modulating and demodulating temporary low-speed connections and instead treat the entire world as an extension of our LAN.

- Many of us will have ISDN lines at home. One of the ironies of ISDN, given its poor implementation by the telephone industry and slow adoption by customers, is that it will end up being the low-end way to get

Continued page 16



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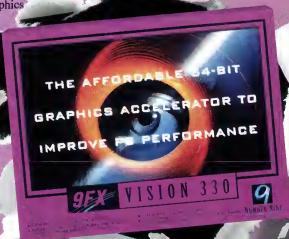
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Microsoft will be forgiven

From page 14

connected to digital networks. And that means it will become the predominant way for individuals at home to go beyond modems. There will be plenty of talk about cable modems, but the very concept of connecting your computer to high-speed networks using a television technology will flummox most people and make it hard to sell the idea.

- We will have begun serious deployment of 100Mbit/sec networks in our systems. We've been talking for at least two years about the next level of performance in our local networks. But the combination of direct Internet connections, ubiquitous e-mail with binary attachments, and distributed filing systems (whether application-oriented like Lotus Notes or system-oriented like NetWare NDS) is finally beginning to push our existing network designs beyond capacity.

- We will have begun adjusting to the idea of Microsoft as our not-so-benevolent dictator. Just as the indus-

try had to adjust in the late '60s and early '70s to the idea that IBM was an immutable force that could be dealt with only by finding the nooks and crannies of the business that it was not interested in, we need to adjust to Microsoft.

Microsoft will learn to back off from being quite so aggressive once it realises that tangling with the Federal Government is a little different from dancing nimbly around IBM.

Microsoft is the key and dominant player in operating systems, productivity applications and applications development and is becoming more and more of a force in networked systems, systems design (for both manufacturers and customers), interactive media and communications systems.

Once we can all make this transition, the industry will find it liberating and we may well see ourselves enter another period of tremendous innovation and excitement.

- **Stewart Alsop is editor-in-chief of InfoWorld in the US**

Osborne: What's next?

From page 10

developers that programs written for Windows 95 will run on their network OS, Windows NT.

Again, for what it is worth, I still feel that the basic applications such as word processing, spreadsheet, graphics and database will soon be included free with your next OS upgrade.

Well, if not free then certainly at a very low price, say \$99 for the lot. My bet is that IBM may do it with the Lotus SmartSuite as part of their next version of OS/2 to counter the Windows 95 release. What would they have to lose?

One final point about Windows 95. I feel it will be adopted more quickly by the SOHO user than the corporate community. The larger corporate and government users usually have a major commitment to existing

hardware and particular applications and will be slower to move to what is clearly a new generation of software technology.

A recent survey showed that of 202 million installed PCs worldwide only 30 per cent had the resources to run Windows 95 effectively.

I say this because when Windows 3.0 was first released the individual users took to it first, with the medium to large users waiting for the 3.1 release. This is not to say that at \$165 per copy many people will buy Windows 95 just to have a play, and based on the above numbers that is forecast to mean over 20 million units

- **Doug Ruttan is a director with Hambro-Grantham Management Ltd, responsible for investments in IT and communications**



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The myth of free support



By Ed Foster

I'm afraid it's time we all realised that free support is like a free lunch: It doesn't really exist.

One place where free support supposedly does still exist is on-line. Whenever a vendor announces ever so quietly that it is dropping free phone support, it inevitably makes a big deal about the wonderful electronic support options still available for its customers. But on-line support really isn't free either, as illustrated by the experience of a griper we'll call Mr. Free.

Mr. Free, a long-time WordPerfect customer, had been in the habit of using WordPerfect's BBS in the US to get answers to technical questions.

"About the time WordPerfect was purchased by Novell, it changed the BBS to a 'user self-help' forum," Mr. Free recalls. "You could still post a question, but you couldn't depend on anybody from WordPerfect answering you. The policy seemed to be that if you wanted the real support, you had to go to the WordPerfect area on CompuServe."

This puzzled Mr. Free until he realised why WordPerfect might prefer that its customers use CompuServe instead of its own BBS. CompuServe support forums are not free.

The user pays connect-time charges to CompuServe for whatever service he or she is accessing, and each vendor gets a certain percentage of those fees, depending on its particular arrangement with CompuServe. By encouraging its customers to use CompuServe rather than its own BBS, in other words, Novell gets money.

Mr. Free continued to use the WordPerfect BBS but soon noticed that there were fewer and fewer fellow users participating.

"Naturally, the message volume went down, since you were unlikely to get an answer," he says. "Finally, a few weeks ago, WordPerfect took the next logical step and said they were eliminating the user support forum altogether and just making the BBS a download service. So first they crippled their BBS and then, when people naturally stopped using it, they said, 'Aha, you obviously don't want it any more, so we'll drop it.'"

Although Mr. Free did not say so, I know that many people would have no trouble concluding who was to blame for this situation. Novell, they would say, with its user-must-pay NetWare support model, is ruining WordPerfect's great tradition of support. I wasn't sure it was that simple, though, so it was time to let Novell have its say.

I spoke with Michael Bishop, director of electronic support for Novell in the US, who acknowledged that the WordPerfect BBS no longer offers a forum for getting answers from either company representatives or other users.

"That decision was based on lis-

tening to customers and the utilisation of the BBS over time," Bishop said. "It didn't seem like it was something where our customers wanted an official presence."

That sounded a bit like the self-fulfilling logic Mr. Free had complained about — of course use is going to be low if users aren't getting answers from the BBS. But Bishop argued it was simple economics.

"Supporting users through the BBS is a more expensive way for the users and for us," he said. "Our costs would go up, which would limit the number of people we could service. So it's a less efficient way than CompuServe, where the cost of providing support can be defrayed across all the users."

To be fair to Novell, very few of the major software companies these days are answering questions via BBS. Led by Microsoft, the industry seems to have moved to the download-only BBS as the standard. So it's hard to be too indignant about the WordPerfect BBS no longer offering service that many of its competitors have never offered. And WordPerfect's retreat from its position as the top support provider was well under way before Novell acquired the company, so all the blame can't be laid there either.

If Mr. Free has a gripe, it's really with the whole industry. And I think it's a legitimate gripe. Software companies like to make it sound like they're giving away the store on-line, but the trend is in fact the same as with support by phone. And, just like on the phone, we can expect we will increasingly be paying more money for lower quality support as time goes on. We might as well face it. One way or another, we're going to have to pay for any help we get.

• **Ed Foster is editor of InfoWorld in the US**

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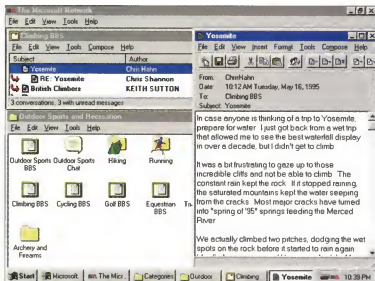
The Microsoft Network may not make it into Windows 95 upgrades after all.

At the time of going to press the fate of the Microsoft Network was still unclear.

There was speculation that the US Justice Department would file a lawsuit to block Microsoft from including the Microsoft Network (MSN) on-line service in the August 24 release of the Windows 95 operating system, however, no decision had been made.

According to published reports, the Justice Department is likely to view the inclusion of MSN in Win95 as a violation of the year-old consent decree between Microsoft and the US government. The settlement was designed to reduce Microsoft's ability to exercise monopoly status in the US marketplace for PC software and operating systems.

The violation may result from Microsoft's insistence that computer makers include the MSN access program along with Win95 on new PCs. The consent decree bars Microsoft from tying the sale of a product with market dominance to that of another Microsoft product to



The US Justice Department may force Microsoft to remove the Microsoft Network from Windows 95

gain market leverage. According to the Reuter Business Alert, Microsoft has declared an "all-out-war" with the US Justice Department over any plans to prevent shipment of Windows 95 with the Microsoft Network access software and Web browser.

The report indicates that Microsoft has no contingency plans

for removing the software and will do battle with the department in the courts, while the department is likely to seek an injunction, preventing shipment of the software in the US.

Reuter says questions are being asked regarding the circumstances of Microsoft losing the fight and whether the software giant would go ahead and ship the software to the rest of the world, in particular to Australia which is unofficially considered a Microsoft Network test-bed.

Industry observers are also discussing the possibility of Internet access providers' businesses folding by the end of the year if the Justice Department gets its way.

Throughout the allegations Microsoft has pointed out that users can choose whether to use MSN, and that the company has done nothing to prevent access software for competing on-line services from running on Windows 95 or to prevent original equipment manufacturers from preinstalling access software for competing on-line services on their PCs.

Osborne rescued by US

Gateway 2000 has sent in the rescue boat and saved Osborne from drowning by buying an 80 per cent stake in the company. This, coupled with the 20 per cent owned by Micranics transforms the once Australian success story into a fully owned American company.

Gateway 2000 will partner Micranics, a US component supplier which received a 20 per cent share in the company after electing to convert the debt it was owed into shares.

Under the deed of company arrangement Gateway 2000 was only obliged to deliver machines within the next two years. However, the company is planning to deliver all outstanding PCs by Christmas.

Gateway 2000 is the fifth largest PC maker in the US. It had revenues of \$2.7 billion last year, and is a direct marketer that has been successful in mail-order sales.

Osborne will keep its name until the end of the year at which time Gateway will consider its long-term branding strategy for the region.

The creditors who accepted the deed will receive five cents in the dollar or a profit-based alternative.

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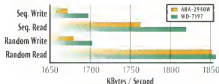
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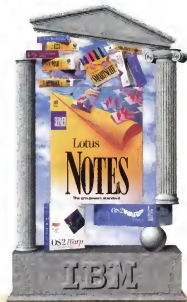
IBM's \$US3.5 million purchase of Lotus is complete, with both companies outlining plans to integrate their product lines and take market share from Microsoft.

According to Lotus Asia Pacific vice-president Steve King, Lotus plans to take as much as 10 points in market share away from Microsoft as an immediate consequence of the takeover.

The purchase has seen IBM gain a desktop suite, a brand name for PC application and workgroup software, and adopt Lotus Notes.

Despite the merger, Lotus will continue to be treated as a separate entity in terms of development, even though it will be absorbed into IBM, according to King.

As expected, Notes will be the heart of the companies' new joint strategy: Notes will be IBM's key mail, messaging, and workgroup package, running on multiple client and server systems. Meanwhile, cc:Mail will become IBM's desktop mail client. Lotus had earlier said it



aimed to have an installed base of 20 million Notes users by 1997. Now the merged companies say they can reach significantly more than that. "Notes has the potential to be the

network user interface," says IBM senior vice-president and Lotus CEO Jim Manzi.

Answering speculation that IBM might de-emphasise Lotus SmartSuite, executives have reaffirmed their commitment to SmartSuite as IBM's lead desktop offering. Lotus clearly won this battle: IBM will also use the Lotus name for all its PC and workgroup software.

As for OS/2, IBM is steering a middle course. In June, when the purchase was still pending, IBM chair Lou Gerstner said he wanted Lotus products to continue running on multiple platforms, including Windows. IBM still makes this point, but it clearly sees a stronger OS/2 version of SmartSuite as a way to boost acceptance of OS/2 among mainstream business users.

Users won't see rapid changes in Lotus products. Before the merger, engineers were already at work on Notes 4.0 and upgrades of SmartSuite for both Windows 95 and OS/2, all due this year. These plans remain in place. But many of IBM's PC software products will be discontinued or folded into Lotus packages.

IBM has agreed to stop developing Visual DB/2, code-named Ultralite, and will instead market Lotus Approach as a desktop interface to DB/2 servers. The most notable cancellation is IBM WorkGroup, a suite of communications and work-flow apps. Some surviving pieces of WorkGroup will be added to Notes or other Lotus products, and a few will be sliced out and marketed separately.

Lotus will still define the look and feel of Notes, especially in release 4.0. Behind the scenes, Notes will be used as a vehicle to link a wide variety of IBM products.

Much to his own surprise, King says the takeover by IBM has been well received by customers, partners and employees alike. ■

Multimedia motherboard

A Pentium processor-based motherboard specification that meets the need for multimedia, lower-priced systems and space-efficient designs, has been introduced by Intel.

Called the ATX specification Intel expects it to be used by most of the world's largest PC vendors.

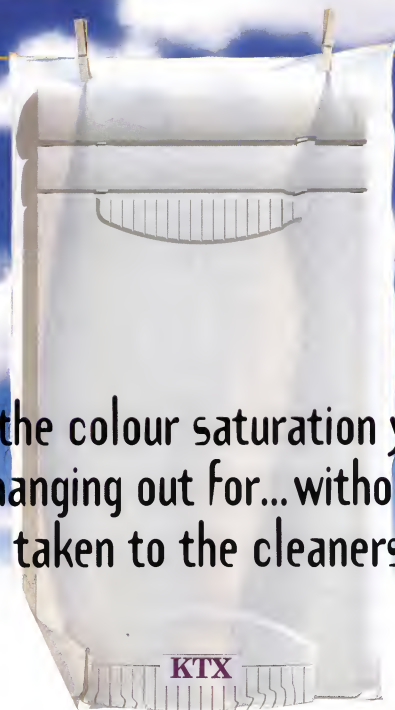
The ATX design takes into account the demand for multimedia-rich data and can support motherboard-based audio, video (including video capture), graphics, connectivity, networking, and unified memory designs, according to Intel.

Unified memory designs — also known as unified frame buffer designs — are slated for use in low-priced systems. In these designs the main memory is used both for system memory and graphics memory.

The ATX motherboard specification is suitable for Native Signal Processing and can accommodate future Pentium processor designs such as those based on Intel's P55C.

Although Intel emphasised that ATX is an evolutionary design, it does require fundamental modifications to the motherboard.

The power supply has been repositioned allowing the processor to be relocated away from the expansion slots. This frees manufacturers to add more I/O functions directly on the board. Also, the ATX power supply, rather than blowing air out of the chassis as in most AT platforms, provides air flow through the chassis and across the processor.



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EDGE TECHNOLOGY

HARDWARE

Pentium notebook with CD drive

Toshiba has announced the Satellite Pro 400. It is a 75MHz Pentium-based modular notebook that offers infra-red wireless communication and quad-speed CD-ROM technology. Two models are available: the 400CDT that ships with a CD-ROM drive as standard; and the 400CS that offers the CD-ROM drive as an option.



Toshiba's Satellite Pro 400CDT Pentium-based notebook

The notebooks ship with 8Mb RAM expandable to 40Mb, an 810Mb hard drive, 10.4in colour display, two stacked PC Card Connectors for two Type II or one Type III card, and a built-in AC adaptor.

The 400CDT features a 10.4in colour TFT-LCD active matrix display, and the 400CS a 10.4in dual-scan STN-LCD display.

The modular notebooks feature a SelectBay that lets users interchange the floppy disk

with a CD-ROM drive, and the AccuPoint integrated pointing device.

The notebook comes equipped with integrated 16-bit stereo sound with .WAV, MIDI and Sound Blaster Pro audio capability, a built-in microphone, line-in jacks and pre-installed audio software.

The Satellite Pro 400CDT weighs 3.3kg and the 400CS 3.2kg.

Prices start at \$8,813 for the 400CDT and \$7,132 for the 400CS.

Toshiba Australia

Phone: (02) 887 3322

Graphics monitor

The Diamond Pro 21TX is a 21in monitor aimed at the graphic arts and prepress market. It includes the diamond match colour calibration system to let users calibrate colour as required.

The flicker-free monitor can display 1,600 by 1,200 pixels at a refresh rate of 75Hz and has an anti-reflective and anti-glare coating.

Features of the monitor include advanced adjustment controls such as moiré reduction, picture rotation and colour purity; 0.30mm aperture grille pitch; and MPRI-II compliance.

The Diamond Pro 21TX sells for \$5,100.

Mitsubishi Electric

Phone: (02) 684 7777



The Diamond Pro 21TX from Mitsubishi Electric

TOP OF THE NEWS

Win95 DRAM drain

The rollout of Windows 95 will likely be termed "memorable" in several ways.

The much ballyhooed operating system and its attendant 32-bit applications are expected to significantly increase demand for DRAM as users upgrade their systems to maintain acceptable performance. The stepped-up demand probably won't result in memory shortages, observers said, but it could keep DRAM prices high.

Estimates vary as to the amount of memory most systems will require to run Windows 95. Most analysts said 16Mb of RAM is a good starting point, though the OS will run in systems with as little as 4Mb.

"It'll run in 4Mb, but it'll run like a snail," said one reseller.

Users and resellers say a migration to Windows 95 may be impeded less by memory and other upgrade questions than by the fact that most companies don't have a good inventory of existing equipment. Several companies are offering memory upgrades, anticipating a surge of demand as Windows 95 and 32-bit applications hit the market later this year.

Multimedia mail spec

As the number of products for securing electronic communications across the Internet grows, interoperability among them is becoming an important issue.

To address compatibility of encryption-based security schemes, Lotus Development, Microsoft, and other e-mail software vendors have endorsed an addition to the Multipurpose Internet Mail Extensions (MIME) specification, the standard for attaching multimedia files to Internet mail.

S/MIME will enable encrypted and digitally signed communication between e-mail products from different vendors, as long as the applications are compliant with the new specification.

An older security standard for text-only Internet e-mail, Privacy Enhanced

The new Toshiba Satellite Pro 400 series is designed for business professionals who insist on comprehensive business capabilities. It is a genuine all-in-one portable multi-media solution combining advanced, quad speed CD-ROM technology with unprecedented expandability and connectivity.

The 75MHz Pentium™ processor with integrated math co-processor enables the Satellite Pro to fly through even the most maths intensive applications, the

new SelectBay™ modular options slot allows you to interchange the quad speed CD-ROM with a floppy disk drive. The floppy disk drive has its own case so it can be connected externally to the computer for simultaneous operation with the CD-ROM.

Presentations come alive on the huge 10.4" (26.4cm) colour displays. (Your choice of crystal clear Active Matrix TFT on the Satellite Pro 400CDT, or the striking STN dual scan LCD on the Satellite Pro 400CS.) Both are supported by a graphics

accelerator, 1Mb of Video RAM, sound card, VL local bus and 24 bit true colours, giving a palette of 16.7 million colours, plus a 32 bit sound card for superb quality sound.

There is a massive 810Mb hard drive with 8Mb of RAM expandable to 40Mb.

There is a new infra-red serial port for cable-free connection with infra-red capable peripheral devices. PC Card expansion in both the computer and the optional

Enhanced Port Replicator for maximum expandability. There is also a Lithium Ion Battery for maximum working time away from a power source.

There are two models available, for more sales information or the name of your nearest Authorised Toshiba Reseller please call on 1800 021 100 or Fax (02) 9979 8193

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Notebooks, printers and monitors

Samsung Electronics has enhanced its product range with the launch of three product ranges: the SENS series notebooks, the SyncMaster colour monitors and the ML range of laser printers.



Samsung's SENS 700 notebook

The SENS notebooks range from the 50MHz 486DX2-based SENS 700 through to the Pentium-based SENS 800. The notebooks ship with 8Mb RAM, expandable to 40Mb, a removable hard drive and hard drive options from 340Mb to 1Gb.

The notebooks are available with either a 10.4in dual-scan colour or TFT colour screen. They come with an integrated trackball and two PCMCIA slots.

Other standard features include local bus video and GUI graphics accelerator, internal 16-bit sound card, microphone and internal speaker.

The SENS 700T notebooks start in price at \$5,990 and the 700D start at \$5,299.

The SyncMaster range comprises 15in to 20in monitors. Features of the range include: on-screen controls; INVAR Shadow Mask for brightness; image quality and a more durable tube;

and Plug and Play functionality via a Display Data Channel (DDC) which lets the operating system automatically configure the graphics controller and monitor.

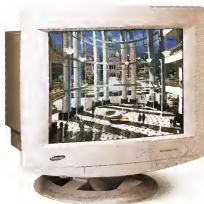
The monitor range includes the SyncMaster 15GLi, which is designed for high-end business multimedia and desktop publishing; the SyncMaster 17GLi, which is aimed at high-end applications, graphics, desktop publishing and entry-level CAD/CAM; and the SyncMaster 20GLs, which is aimed at graphic designers, high-end desktop publishers and CAD/CAM engineers.

The ML printer range is aimed at the SOHO market. Two models are available: the ML84 and ML85. Both are 600dpi printers that offer a print speed of 8ppm. The ML84 comes as standard with 1.5Mb RAM, upgradable to 32Mb and PCL4 emulation. The ML85 ships with 2Mb RAM, upgradable to 32Mb and PCL5e emulation.

Both printers are Windows 95 compatible and offer Plug and Play features and a graphic display on the PC screen showing printer status as well as a voice message.

The ML84 sells for \$1,199 and the ML85 for \$1,399.

Samsung Electronics Information Systems Division
Phone: (02) 638 5200



Samsung's 17GLi SyncMaster colour monitor

TOP OF THE NEWS

Mail (PEM), failed to catch on with e-mail vendors because the process of verifying the integrity of PEM messages was too complicated.

P6 samples for desktops

Desktop users wanting Intel's fastest chip will have the opportunity to sample the initial versions of the P6 offer all.

Although it's still being positioned primarily as a server chip, the 150MHz P6 will also be targeted at high-end desktop systems, Intel indicated recently.

When it first introduces its next-generation chip later this year, Intel intends to do so with two versions of the P6 processor.

In addition to the 150MHz chip, there will be a P6 that operates at 133MHz.

Intel will still be positioning its Pentium line — including the forthcoming P55C — as its primary Windows 95 platform; the P6 will offer little improvement in running 16-bit applications.

The 150MHz P6's faster internal clock speed makes it more suitable in a processing-intensive environment, such as graphics.

According to an Intel official, the way clock speeds — which vary from component to component — are synchronised throughout the system, the 133MHz Pentium is actually more suitable for use in a server system.

The 133MHz P6 features a faster memory bus speed than the 150MHz chip, a critical distinction for server vendors, company officials said.

The memory bus for the 133MHz P6 is 66MHz, compared with a memory bus speed of 60MHz for the P6. Intel cited both standard graphics workstations and workstations that do software-only videoconferencing as examples of where a 150MHz P6 desktop would be useful.

In a demonstration of the processor's prowess, Intel showed a 150MHz P6 system running Windows 95 and rendering animated three-dimensional objects in real time.



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Pentium notebook

AST has added to its Ascentia range of notebooks with the release of the Ascentia 950N. It offers a 10.4in screen, up to 1.2Gb hard drive, infra-red communications and integrated sound.



Based on a 75MHz Pentium processor, the notebook is aimed at the mainstream professional user. It comes as standard with 8Mb RAM, expandable to 40Mb; a choice of removable 500Mb, 800Mb or 1.2Gb hard drives; a Creative Labs Sound Blaster Vibra 16 hardware that lets users incorporate .WAV and MIDI audio functions in documents, and record

voice, music and sound effects through the built-in microphone; a 36mm speaker; and audio line in/out ports that let users connect the 950N to an external stereo sound system or CD-ROM drive.

Models are available with either a 10.4in Super VGA TFT or VGA dual-scan STN screen.

The 950N offers up to four hours of battery life and ships with power management features that power down the hard drive and screen after periods of inactivity.

The AST Ascentia 950N weighs 2.8kg and starts in price at around \$6,000.

AST Australia

Phone: (02) 415 5400

Notebook with smart battery

Canon has announced the Innova Book 1000, a 75MHz Pentium

notebook that uses the Duracell smart battery.

The notebook comes as standard with 16Mb RAM, upgradable to 32Mb, an 810Mb hard drive, 3 $\frac{1}{2}$ in floppy disk drive, two PCMCIA slots, and infra-red transfer that lets users transfer data to another notebook or peripheral.

The smart battery displays on-screen how many minutes of battery charge are remaining.

The notebook weighs 2.7kg and includes a built-in joystick mouse and built-in sound card. It comes bundled with Windows 3.11, MS DOS 6.22 and 20 TrueType fonts.

The notebook measures 297mm by 220mm by 53mm and is sold bundled with a BJC-70 portable colour Bubble Jet printer. It sells for \$11,995.

Canon Australia

Phone: (02) 805 2000



Canon's Innova Book 1000 comes bundled with a colour Bubble Jet printer

TOP OF THE NEWS

Delrina buys Satisfaction

Delrina, which is in the process of merging with Symontec, has rounded out its fax product line by acquiring the Net Satisfaction package from Intel.

Under the terms of the agreement, Delrina officials said, the company will continue working with Intel to create software, networked fax packages, and desktop management applications.

Financial terms of the Intel agreement were not disclosed.

CompuServe on the move

Facing a major challenge in the on-line service market from The Microsoft Network (MSN), CompuServe Pacific has announced a range of initiatives and price cuts.

Acknowledging the popularity of CompuServe's Internet tools, Brendan Lansdowne, CompuServe's marketing manager, commented that the "Internet is part-and-parcel of an information service". As part of CompuServe's efforts to "blur the lines" between the CompuServe network and the Internet, CompuServe will move its Electronic Mall part-and-parcel onto the World Wide Web. In other Web-related developments, the Spy Mosaic Web browser will be integrated into the next version of CompuServe's WinCIM interface; and CompuServe is "exploring" the possibility of allowing subscribers to develop their own Web pages for loading onto the Web, using no more than basic word processing skills.

In the first stage of a two-step set of price reductions, new CompuServe members will be given a free basic services access for one month. The basic economy access rate will drop from 15c/min to 13c/min (\$7.80/hour).

Casual Internet access will be charged at 16c/min (\$9.60/hour), and Internet Club access will be charged at 10c/min in (\$6/hour).

Peak-time services will come down to 20c/min (\$12/hour), and extended services to 31c/minute (\$18.60/hour). ■

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Pentium desktops and system management

IBM has announced 75MHz and 90MHz Pentium-based Personal Computer 300 models. The machines ship with diagnostics, system management and ease-of-use software.

The machines have SelectaSystem, which lets users select OS/2 Warp or DOS/Windows as their operating system by clicking on an icon.

Security features include a lockable sliding front cover which restricts access to media; three-level password; diskette boot inhibit; boot sequence control; boot without keyboard and hard disk I/O control.

The machines are Plug and Play-enabled and PCMCIA-capable.



Prices start at \$3,433 for the 75MHz PC 300. It comes as standard with a 540Mb hard drive and 8Mb RAM.

IBM also announced Netfinity 3.0, the latest version of its PC systems support and asset management software for PC networks. It ships on all IBM PC Servers and lets users predict system failures and potential errors from a remote site. It allows remote dial-in support, automatic scheduling of events, remote notification of failures and errors,

including power-on startup warnings, as well as detection and monitoring of disk drive failures.

IBM Australia
Phone: (02) 132 426

Label printer

Brother has introduced the PT-PC Windows colour label printer. It is an electronic labelling system that lets users create customised labels. It includes more than 250 scalable symbols and lets users print fonts, symbols, logos, graphics and barcodes.

Features of the PT-PC include the ability to print mirror image and

print vertically and horizontally; auto underlining and framing; sequential numbering; auto date and time print; and an automatic tape cutter.

The unit uses laminated or non-laminated tape and uses five sizes of tape, from 6mm to 24mm.

Brother
Phone: (02) 887 4344

Colour workgroup printers

Hewlett-Packard has announced the HP DeskJet 1600C and 1600CM, two colour inkjet workgroup printers. Designed to handle the everyday black and colour printing demands of small- to medium-sized workgroups (one to 10 users), the printers offer a range of paper-handling and advanced networking capabilities.

The printers ship with four separate ink cartridges: black, cyan, magenta and yellow, with integrated print heads. The black print head

offers 600 by 600dpi resolution. They feature an enhanced heating system that helps the black and colour inks dry quickly on plain and glossy paper and transparencies.

The printers come as standard with a 180-sheet input tray that can handle A4, Letter and Legal-size paper. An optional 500-sheet paper feeder is also available.

The DeskJet 1600C is designed for Windows and DOS environments. It offers 4Mb of memory, expandable to 100Mb, and is equipped with enhanced HP PCL5. The DeskJet 1600CM ships with 6Mb of memory, expandable to 70Mb; an HP JetDirect network print-server card; Adobe PostScript Level 2; and automatic language switching.

The 1600C can be upgraded to the 1600CM.

The HP DeskJet 1600CM sells for \$4,046 and the DeskJet 1600C sells for \$2,773.

Hewlett-Packard
Phone: 131 347



Create custom labels with the PT-PC

**"If I were to wish for anything, I should not wish
for wealth and power, but for the eye which,
ever young and ardent, sees the possible."**

Søren Kierkegaard



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Ergonomic PCs

Fujitsu has introduced a range of "ergonomic professional" ErgoPro PCs, and has launched the PrintPartner30.

The ErgoPro range comprises three products aimed at professional business users.

Security features include PIN number identification and Team-Crypto software for protecting data files. The PCs support Plug and Play and display

data channel (DDC) as standard.

Ergonomic features include ErgoFOOT, ErgoARM, ErgoPro Keyboard, and ErgoPro Screen.

The ErgoFOOT lets users place the PC on the floor by the desk or under the desk. ErgoARM lets users raise and lower the screen.

According to Fujitsu it has developed a disk silencer that lowers the noise dissipation dramatically. It claims the computer is nine times quieter than its nearest competitor.

Prices of the ErgoPro start at \$1,571 for the ErgoPro "e". The ErgoPro "x" series starts at \$2,811 and the top of the range "s" series starts at \$4,736.

The PrintPartner30 is a compact laser printer designed for office use.

It is a 30ppm printer that offers 600 by 600dpi resolution and A4/A3 duplex printing as standard.

Features of the printer include 16Mb RAM, expandable to 64Mb; a 12-level security mailbox output-option; an optional 2,000-sheet output stacker; and support for PCL5e.

Fujitsu Australia
Phone: (02) 410 4555



Notebooks with GlidePoint

Sharp has added to its notebook range with the release of the Colour Star PC3010 and PC3050. Based on a 66MHz 486DX2 processor, the notebooks feature the GlidePoint pointing device instead of a mouse or integrated trackball.

Aimed at the first-time buyer and mobile SOHO users, the notebooks come as standard with 4Mb RAM, expandable to 32Mb, a 320Mb (on the PC3010) removable hard drive, and a 10.4in colour passive-matrix screen.

The GlidePoint pointing device lets users control the movement of the mouse by gliding their finger over the GlidePoint area.

Other features of the Colour Star PC3010 and PC3050 include wireless interface communication with other IRDA-compatible IR ports, and two Type II and one Type III PC Card slots.

The PC3050 also offers a 500Mb removable hard drive and a multimedia sound system with built-in

stereo speakers and microphone.

The PC3010 sells for \$2,995 and the PC3050 for \$3,995.

Sharp Corporation
Phone: (02) 831 9111

Copier/printer in one

Konica has announced the 7728 colour laser copier/printer. It operates as a stand-alone full-colour digital laser copier, and with an optional controller turns into a

colour and black and white printer.

Aimed at the professional business office, it offers a print speed of 28ppm in black and white and 6.5ppm in colour.

The copier/printer gives users the ability to reproduce full-colour copies, add spot colour and create originals in a single pass at 400 by 400dpi resolution. Starting with a black and white original, users can circle areas to be changed with a coloured felt-tipped marker; the 7728

then colour-converts the marked areas to the colours indicated.

Users can also circle an area they want deleted and the 7728 will eliminate everything within the circle. Copier functions include zoom reduction/enlargement in six preset ratios and two user-adjusted ratios, and reverse image and anamorphic enlargement/reduction.

It is PostScript Level 2 and HP PCL-5C compatible and comes as standard with three 500-sheet paper trays.

Konica Australia
Phone: (02) 886 0333



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SOFTWARE

Is Windows 95 for you?

Can't decide about upgrading to Windows 95? Not sure what it will actually offer, or if you really need the new features?

Micro Management Services has announced a video-based course for Windows 95 that can

help answer these questions. Called the Windows 95 Executive Summary, it is a tool designed to help you evaluate and implement Windows 95.

The Windows 95 Executive Summary is designed to help

computer managers decide whether to upgrade to Windows 95, and help trainers and end-users prepare for the upgrade. The 90-minute videotape provides information on transition issues, the differences from Windows 3.1, hardware requirements, installation and the capabilities of Windows 95. It also gives users an overview of the features Windows 95 will offer.

Full media-based courseware for end-users on Windows 95 and Office 95 will also be released.

Micro Management Services
Phone: (02) 948 1288

Create your own flowcharts

Micrografx has announced two flowcharting and diagramming software packages: ABC SnapGraphics V2.0 and ABC FlowCharter 4.0.

SnapGraphics is aimed at business users with limited drawing skills who want to create flowcharts and other diagrams such as organisation charts, timelines and network diagrams.

It includes more than 500 intelligent shapes that can be dragged and dropped into application-specific templates, connected via sticky lines and can have text added.

FlowCharter 4.0 is designed for those users that need more

powerful flowcharting features and the tools necessary to track costs, cycle times and other variables.

It offers the same drag-and-drop flowcharting functionality of SnapGraphics and adds enhanced features such as intelligent line routing, automatic line cross-overs and auto add and delete shapes.

FlowCharter 4.0 also features the ability to assign metrics such as cost, cycle time and markers to shapes.

ABC FlowCharter 4.0 sells for \$495 and ABC SnapGraphics V2.0 for \$95.

Micrografx
Phone: (02) 415 2642

Wine guide

The Microsoft Wine Guide is an interactive multimedia guide to wines, the winemaking process and the wine regions of the world. It takes users through the basics of how to choose and taste wine and lets them explore the grape-growing and winemaking processes.

It offers interactive flowcharts, videos and audio pronunciation guides.

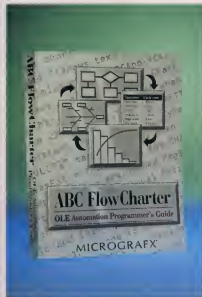
The program lets users define selection criteria by region, grape variety, star rating or accompanying meal. It lists the appropriate wines with tasting notes. After choosing the wine, users can print the detail of the screen with tasting notes and labels, and add the wine to a customised list.

The guide comprises five sections: Wine Tasting with Oz (Oz Clarke, the host of the program), All About Wine, World Atlas of Wine, Wine Encyclopedia, and Wine Selector.

The program includes interactive scrolling flowcharts that show how wine grapes are grown, harvested, fermented and bottled.

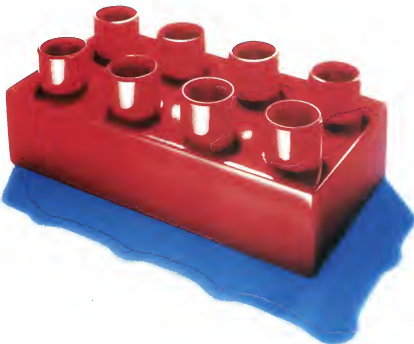
The Wine Guide sells for \$39.95.

Microsoft
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Utilities for Windows 95

Symantec has released three packages for Windows 95: Norton Utilities, Norton AntiVirus, and Norton Navigator.

The Norton Utilities for Windows 95 is a 32-bit system protection and data recovery program. Designed specifically to leverage Windows 95 architecture,

it helps users prepare their systems prior to installation of Windows 95 and ensure system reliability and data security in the operating environment.

It offers four levels of protection. At level one the pre-installation tune-up frees up disk space and readies the system for

Windows 95 installation. After installation, level two protection in the System Doctor monitors and analyses system resources and data integrity, and offers proactive responses to problem conditions. Level three protection provides a set of tools such as Space Wizard, Disk Doctor, Speed Disk and System Information for performing analysis and repair on the Windows 95 environment. Level four protection is offered through utilities such as Norton Diagnostics, UnErase, UnFormat and Disk Edit.

Norton Utilities for Windows 95 sells for \$199.

Norton AntiVirus for Windows 95 is a 32-bit version of the virus protection product. The program automatically and continuously scans the system for known and unknown viruses. It uses self-diagnostics to prevent infection of its own files and also scans compressed files.

When the program finds an infected file it gives the user the option of deleting it or repairing the virus-damaged files. It also repairs boot records damaged by viruses.

Norton AntiVirus for Windows 95 sells for \$129.

Norton Navigator is a set of 32-bit file management tools and desktop enhancements for Windows 95. It is designed to help users get around the desktop.

Features include built-in Internet FTP mapping and file transfer, allowing users to copy files to and from Internet FTP sites with drag and drop from the Norton File Manager; the ability to use Long File Names in the open/save dialogue boxes of most 16-bit application; and the ability to access file management tools from the open/save dialogue box of most applications.

Other features include Norton File Assist, Norton Extensions and Norton File Archive Wizard.

The Norton Navigator for Windows 95 sells for \$169.

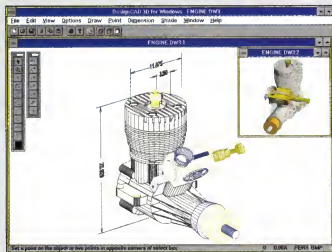
Symantec
Phone: (02) 879 6577



3-D CAD

DesignCAD 3D for Windows is a 3-D CAD system aimed at professional and casual users. The program features a walk-through animation feature enabling users to view objects from different angles.

It automatically smooths animations from each keyframe to the next and users can distribute the slideshow with the package's Slideshow Player. It offers a range of textures, such as steel, chrome, wood, glass and



aluminium. DesignCAD 3D also features a curved-surface construction function. It has point snaps for the nearest point, intersection, line, and midpoint. Users can also enter absolute, relative and polar co-ordinates.

DesignCAD 3D offers extrusion commands that let users extrude lines or curves along several directions, or in a spiral.

It ships with on-line help, a manual, tutorial, Quick Edit boxes, multiple views and drawings and 250 3-D symbols.

The program includes a Viewing Toolbox, Colour Toolbox and Material Toolbox. The Viewing Toolbox gives users control over View settings for the active View window. The Colour Toolbox gives users the ability to change the current drawing colour, or apply a specific colour to selected items, and the Material Toolbox gives users control over the surface texture of the items they are drawing.

DesignCAD 3D includes an automatic window tiling feature that lets you open multiple drawings simultaneously and have an unlimited number of views.

DesignCAD 3D sells for \$699.

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THE COMPUTER SPECIALISTS 131 486

COMMUNICATIONS

9-port hub

Olicom has expanded its Ethernet range with a hub that provides connectivity for networks ranging in size from 9 to 240 devices.

Called the Olicom OC2606, it is a 9-port hub that can automatically recover from most network failures. If a cable between two hubs is not functioning properly, each hub will automatically disable the connection, allowing the workgroups connected to continue operation independently.

If the hub detects a failing user connection, it will partition the port to prevent disruption of other network transmissions. When a partitioned port resumes normal operation, automatic reconnect facilities ensure the port is added to the network again.

Stand-alone, the hub provides connectivity for a small network of up to eight 10Base-T end-stations, with a BNC port providing connectivity to an Ethernet backbone or an end-station. For larger sites, up to 30 hubs can be cascaded together using the BNC port.

It is fully IEEE 802.3-compliant and sells for \$515.

Force Technology
Phone: (02) 417 4477



Mail and cc:Mail; OLE 2.0 support, enabling users to drag a phone book entry to the Windows 95 desktop and connecting to the service from the desktop by clicking on the icon; long file names and path support.

QmodemPro offers users a script language with QuickLearn capabilities for automating on-line sessions and creating custom interfaces. The script language offers a compiler and debugger.

QmodemPro for Windows 95 version 2.0 sells for \$199.

Banksia Technology
Phone: (02) 418 6033

Manage your network

Symantec has added to its Norton Network Series of products with the release of the Norton Desktop Administrator 1.0.

It is a network management component for controlling and managing end-user desktops across the enterprise.

It gives administrators the ability to establish common desktop interfaces that simplify and control user access to networked and locally based DOS, Windows 3.1 and Windows 95 applications and files.

Administrators can tailor the amount of control they maintain over the desktops of individuals or groups and can control the degree of freedom users have in modifying their desktop interface.

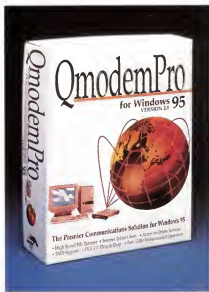
The program can ease the migration to Windows 95 by allowing administrators to migrate users in stages.

Administrators can control desktop interfaces and upgrade users from a 16-bit version of a Windows application to a 32-bit version in manageable groups.

The Norton Desktop Administrator sells for \$699 per 10-node pack, \$1,699 per 25-node pack and \$2,999 per 50-node pack.

Symantec Australia
Phone: (02) 879 6577

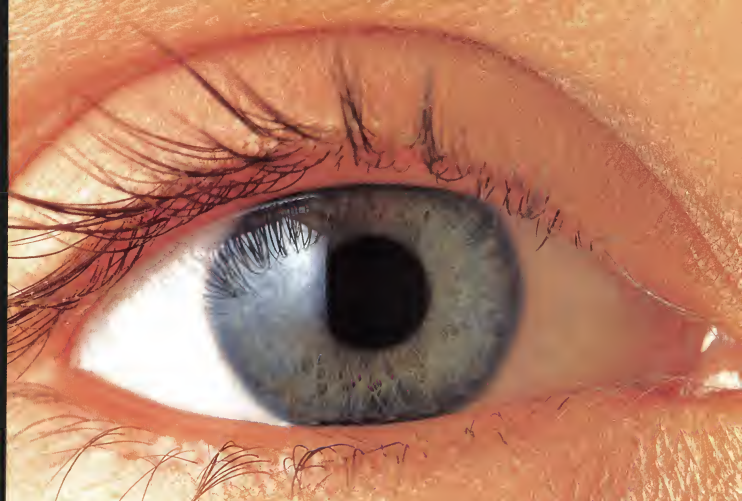
Communicating with Windows 95



Banksia Technology has announced an on-line communications software for Windows 95.

Called QmodemPro for Windows 95 version 2.0, it offers features including a phone book, a Telnet client, programmable toolbar, graphic viewer, OLE 2.0 drag and drop handling, script language, macro keys, host mode, 35 terminal emulations and 11 file transfer protocols.

Other features include: TAPI (telephony API) support, that lets users share communication devices between multiple applications; MAPI (mail API) support, allowing users to transfer text, images and files to electronic mail programs such as Exchange,



At the end of the day, it's clear why Hitachi are the most watched monitors in the world.

All you can do with a monitor is look at it.

Hour after hour after hour. And unless it has a high refresh rate to keep the picture stable and flicker-free, eye strain and fatigue are certain consequences.

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That alone is a compelling reason to look at Hitachi ahead of anything else.

There are others.

On-screen software control, compliance with all current VESA international standards

and MPR 2, Plug and Play and Energy Star.

Plus a full range of monitors to suit every application from basic windows to high-end graphics and imaging. Hitachi monitors are manufactured under ISO certification in sizes up to 21". The Accuvue series carries a 3 year warranty.

Why haven't you seen Hitachi monitors before? The answer is that you almost certainly have. With someone else's name on it.

The fact is that Hitachi has been making monitors since 1963, most of which have been rebadged by the biggest names

in the business.

Hitachi is one of the largest makers of computer monitors in the world.

To get the full picture, phone (02) 929 8799.

Or Freecall 008 338 819.

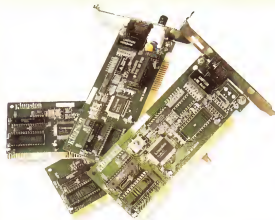


HITACHI

Low-cost network interface cards

Kingston Technology has released two EtherRx ISA Ethernet cards. Two models are available: the KNE 2000TLC and the KNE 2021LC. The 2000TLC supports 10Base-T media and the 2021LC is a dual-interface version that supports 10Base-T and 10Base-2 media.

The cards feature Qstart, an installation, configuration and diagnostics utility that is designed to ease the installation process.



Kingston's new low-cost Network Interface Cards

The two ISA Ethernet cards offer NE2000 compatibility, allowing users to choose from the network operating system's built-in NE2000 driver or the driver suite that is included with Qstart.

The LC (low cost) cards sell for \$64 and \$69 respectively. **Kingston Technology**
Phone: (03) 96 9099

Manage your Notes

Lotus NotesView is a graphical product designed to help systems administrators manage and control their Lotus Notes environments.

Designed for use with Notes release 3.x networks, it features a Windows-based graphical management station with a colour-coded display that offers

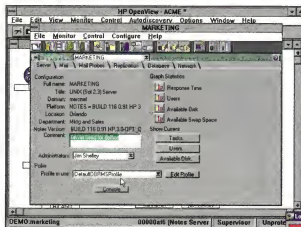
real-time information about Notes environments, such as server, replication, and mail routing facilities.

The NotesView management station can store information locally then use it to graphically display changes in the Notes environment, as well as create reports or provide alerts and alarms when various conditions occur.

The NotesView Management station requires HP OpenView for Windows 7.2 or HP OpenView Workgroup Node Manager 1.0 for Windows.

Lotus NotesView for Workgroups, for managing sites with one to 10 servers, sells for \$5,329.

Lotus Development
Phone: 1800 252 408



The NotesView management station

Safe faxing

3D FAX is a program that encodes digital files as compressed and formatted images. It comprises two separate modules: 3D FAX Send and 3D FAX Read.

The FAX Send module contains the functions to select files for infomaging processing, transmission modes and options, printing of infomage files, and interfacing to fax communication.

The FAX Read module offers the functions for accessing and selecting a received file, scanning and infomage, unlocking a secured file via password, and translating an infomage file to its original application format.

The program uses data transformation technology called infomaging and, according to Palladium Technology, it can place as much as 40K of compressed data on a single page. This compressed data can be sent from a computer via a fax card or fax modem directly to another PC.

When printed by a fax machine, the transmitted document or file appears as a two-dimensional black and white image referred to as an infomage.

The printed infomage is scanned using an optical flat-bed or hand scanner into a computer. 3D FAX software then restores the transmitted file to its original content and format and automatically opens it in the software application in which it was created.

When a 3D FAX infomage is received at a remote fax machine site, it must be transformed back into an intelligible form through the use of the 3D FAX Read Module.

It can send and store anything that can be converted into a digital file: programs, digital voice and digitised music.

The program incorporates automatic error correction capabilities and security features. The Standard version sells for \$199. **Palladium Technology**
Phone: (02) 9965 7268 ■

"The Edge Terminator 100 is easily the fastest system we've tested"

Windows Sources Australia, March 1995



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Windows Sources, March 1995

"The Microarts Pentium™ 100 is certainly a potent multimedia system and managed to get within striking distance of the **fastest PC we have ever tested, The Edge Terminator 100**."

Windows Sources, May 1995

Edge Predator 486DX4/100

"When confronted with a 486DX4/100 system that outperformed many Pentium™ 75's and 90's in Winstone, Graphics, Hard Drive and Video Playback tests – we just have to award it and **Editor's Choice**. Edge soundly **out-performed its rivals**. In most cases only the very best of the Pentiums could show the Edge a clean set of heels, but in the CD-ROM throughput and disk performance tests, the **Edge vanquished all comers**. Graphics and Winstone performance was exceptional for its class. DOS 6.22 and Windows for Workgroups 3.11 are pre installed and the system is bundled with Encarta 95, Works, Money, Golf, Dangerous Creatures, CD-ROM sampler and The Best of Entertainment Pack."

Windows Sources, May 1995

Edge Media Studio 486DX2/66

"As an introductory multimedia system the Edge Media Studio is certainly hard to beat with its outstanding performance for its class and a good bundle of CD's. It scored first place in its class in Winstone, Disk Winmark, Imagine, video playback and CD-ROM tests, and second in our Graphics Winmark test. Edge Media Studio's Mitsumi twin-spin CD-ROM was faster than average, out-paced only by the Creative DC-200. AVI playback was **exceptional for its class** and was the only DX2-66 that did not drop any frames with a perfect 15fps score, while the nearest competitor managed 12.87fps."

Windows Sources, Dec/Jan 1995

Edge Rocket 90

"The lowest priced system tested, in its 16M configuration, the Edge Rocket was also **one of the fastest systems tested**, managing second place overall in the performance test. This system was one of the few that managed consistently high performance in most tests, earning its **overall high placing**."

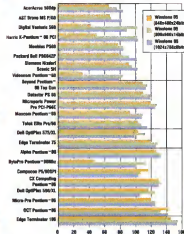
Windows Sources, October 1994

Edge 486DX2/66

"In the DX2-66 group, it's hard to go past the Edge machine ... This PC offers that rare combination of performance and price and easily wins a **Best Buy**. We also looked for a candidate to take our SOHO Best Buy but since the Edge had the **highest test score and the second lowest price**, none seemed worthy."

PC World, July 1994

Winstone 95 Test Results



Edge Technology systems are streets ahead of the competition. This graph illustrates just how far.

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Long live the File Manager

Thanks for a very informative magazine. It's by far one of the best I've read.

Reading your Windows 95 review in the August issue "The Mobile Office", I was astonished and disappointed at Microsoft's plan not to include the server application (needed for dial-up networking) in its release of Windows 95, and that if a user wants this feature he/she can purchase it as an optional extra.

I cannot see the logic in this and take issue with Brad Chase (general manager, Microsoft personal systems group) who described the feature as the mag wheel and chrome trim for Windows 95.

A more accurate analogy would be like a car dealer selling a car with three wheels and the fourth one is an optional extra.

I ask what is the use of shipping a client dial-up networking without the server. The server is a crucial application to the entire dial-up networking feature and should be included with the operating system.

Come on, Microsoft, lift your game.

Also, in the same issue you published an article titled "What's Missing From Windows 95". I had a look at the latest beta release and could not find a way, using the new GUI, to do a humble DISKCOPY. The only way to do it was to run DISKCOPY from a DOS box or to run the old Windows 3.1 File Manager and use it to do a disk copy. I have written to some Microsoft personnel using MSN and they confirmed that.

How hard would it have been for Microsoft to add a menu item to effect a disk copy operation when you right click on the floppy drive icon?

It seems that File Manager is not dead after all.

— Michael Antonios

On-line advice

I am writing to ask Geoff Long a question regarding on-line services. I currently subscribe to CompuServe Pacific and find it very good, except that it is so American-oriented.

For example, I have had to join Telecom Discovery to get electronic banking and share-market information.

If the Microsoft Network, which I understand will be replacing Discovery, has more local content I may cancel my CompuServe account.

CompuServe is also going to 28,800 bit/sec later this year and that will mean a modem upgrade (I have a Voidax III 14,400 bit/sec) and a

new 16550 UART on my COM port instead of the 8250 UART currently fitted.

I would appreciate your advice.

— Roger Box

I'm afraid I can't give you much advice because I haven't seen the Microsoft Network and have recently moved to Hong Kong, from where I am writing this. However, if you want more local content I don't know that you have to join the Microsoft Network to get it: why don't you check out one of the other service providers, such as Ozemail or Pegasus? These have many local forums that have some quite good local information and access to other local Internet forums around the country. You might have to search a bit harder, but things such as local Web sites, which Microsoft won't initially offer, can be great for local info and there are thousands of them. Personally, I don't see the need for the Microsoft Network as I believe we're adequately covered already. But then again, I'm speaking for my personal needs. Sorry I can't help you any further, as this is being written before the actual launch of Microsoft Network.

— Geoff Long

A good help

I am an Australian PC World subscriber and have been so for the past three years. A few years ago I completed an Associate Diploma in Information Technology and thanks to PC World, it saved me a lot of leg work, as the articles contained are well researched and presented and I was able to get straight into my assignments without too much trouble.

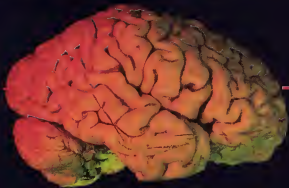
As most of the articles are in simple terms, my teenage children too read it most of the time. As a matter of fact, my daughter who is in Year 11 used the articles on Internet for her last assignment and commented how it is all set out in simple language.

— Rory Paul

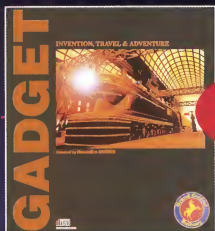
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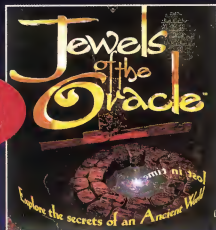
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**ROADSHOW
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Symantec's control, repair tools for Windows 95

You're ready to charge into Windows 95, but is your PC ready to follow? To find out, install the latest version of Symantec Norton Utilities. The new version of this venerable toolbox (we looked at the Preview Edition) runs a pre-installation checkup under Windows 3.1 to make sure your hardware is up to the task.

Then the 32-bit Norton Utilities assigns Disk Doctor and System Doctor to residency in your PC. Disk Doctor scans normal or compressed drives for problems. If repair is needed, it offers diagnostic tools that go beyond the simple set in Windows 95's ScanDisk.

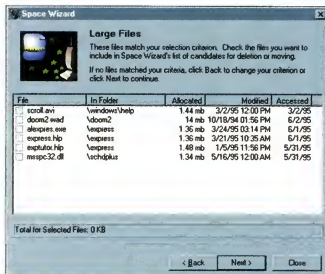
Major improvements are more precise control over diagnostic and repair operations and more complete reports about these procedures.

System Doctor monitors computer activities and sounds an alarm when an assigned threshold is reached. For example, you can ask for a pop-up warning when your hard disk becomes too fragmented. System Doctor can prescribe the right corrective from Disk Doctor's little black bag.

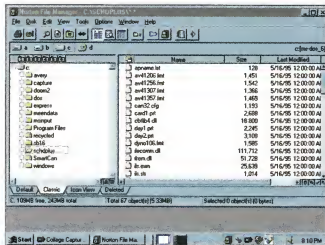
These tools have some new companions. Best is Space Wizard, with its clear instructions for finding and removing duplicate and seldom-used files. It's easy to specify the size, type, and last access date for unruly files (eg, show me all files larger than 1Mb that I have not opened in three months). The selected files can be deleted, moved, or archived.

An improved explorer

Another Symantec program, Norton Navigator, extends Windows 95's Explorer. Because Symantec bought Central Point Software, you will feel at home with Navigator if you've used recent versions of Norton



Space Wizard sounds like a George Lucas film, but it's actually a smart way to minimise disk clutter



Navigator's Taskbar (bottom) lets you click to select different desktops or recently used programs and files

Desktop or Central Point's PC Tools.

The beta release of Navigator we examined supports multiple desktops and drag-and-drop file management, making the Windows 95 interface easier to get around. An expanded Run shortcut lists the most recent applications and documents launched on your machine. The Taskbar provides a QuickLaunch area for docu-

ments and programs you use in all desktops.

Navigator lets Windows 3.1 applications recognise long file names. SmartFolders, which holds applications and documents related to specific jobs, updates automatically when opened. And Internet tools let

continued page 50



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Office 95 upgrade sets the standard

Microsoft's suite includes new 32-bit versions of Word, Excel, Powerpoint, Schedule+ and Access

One sobering reality awaits Windows 95 users: the operating system's biggest advantages are available only when running 32-bit applications. Microsoft prodded developers to deliver native 32-bit applications as soon as the operating system shipped, but nothing is more likely to motivate third parties than having to compete with Microsoft's own Office 95 upgrade.

Like previous versions, Microsoft Office 95 Standard has a word processor (Word), a spreadsheet (Excel), and a presentation graphics program (PowerPoint). All three 32-bit applications carry the version number 7.0. The suite also now includes a 32-bit Schedule+ workgroup personal information manager, formerly part of Windows for Workgroups. The Professional Edition (which adds the Access 7.0 database) will appear a month or two after the Standard edition.

Windows 95 support

Each program improves incrementally on its predecessor; based on our beta tests of the new Word and Excel, we expect each to perform better than its 16-bit ancestor.

The most notable improvement is support for Windows 95's features and interface, including long file names, right-mouse-button functions, multithreading, and document creation from the Windows desktop. (Multithreading is limited to printing in Word and PowerPoint, queries in Access, and slide-show mode in PowerPoint.)

Unlike earlier upgrades, Office 95 applications (except PowerPoint) use the same file formats as recent 16-bit versions, so you can use them interchangeably — a must for those who dual-boot Windows 3.x and Windows 95.

But Office 95 won't work on Win 3.1, and Microsoft has no immediate

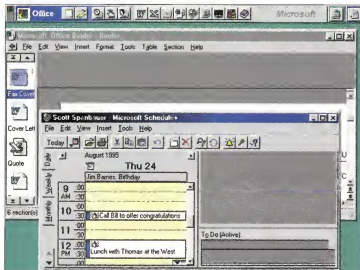
plans to upgrade the 16-bit Office programs.

Office 95 adds utilities to Windows 95 that let you keep documents, appointments, and contacts organised. Earlier versions came with the innocuous Microsoft Office Manager, a floating toolbar of launching buttons; Office 95 offers an enhanced replacement called the Shortcut Bar, with multiple configurable toolbars. Like the Windows 95 Taskbar, it can be moved around the desktop and even hidden, so you can create custom menus of frequently used file and directory icons.

The Shortcut Bar solves a Windows 95 interface gap: since one of the bar's default tools is the Desktop, you can get at documents and other icons living there without minimising the window you're working in. The bar also lets you open the appointment, task, and contact dialogue boxes in Schedule+.

Office applications take advantage of the improved Schedule+, which now has a contact manager. For instance, the standard Word toolbar lets you insert names and addresses from a Schedule+ contact database.

Another nifty new Office feature — the ability to post documents in public Exchange folders — makes it easier for groups of networked users to share information. The Folder View lets you rearrange groups of documents by criteria such as whether they have been edited — a boon to ▶



Office 95 adds a compound document container called the Binder and an improved version of Schedule+

Microsoft Office for Windows 95

Standard and Professional Editions 32-bit version of business software suite tailored to Windows 95's interface

Key features: Better multitasking versions of Word, Excel, PowerPoint, Access (Professional only), and Schedule+. Support for compound documents through OLE

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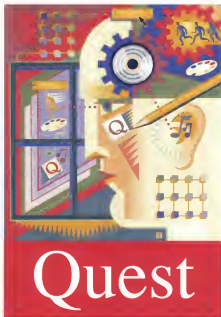
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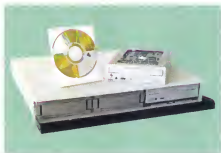
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Compound documents

Windows 95's desktop still doesn't offer one of OS/2's finest tricks: the ability to organise groups of documents into work-spaces. But a new utility in Office, the Binder, lets you group collections of related documents — such as a résumé, cover letters, and a database of potential employers — into a single compound document.

Opening the Binder lets you jump from one document to another without launching a new application or hunting through Explorer. Instead, you click the

What's new?

Word 7

Answer Wizard
Tip Wizard
Easier document retrieval
Automatic text correction
More spellchecking
New templates
Automatic bullet lists
Automatic fractions
Functions as an e-mail editor

Excel 7

Answer Wizard
AutoCalculate
Easier document retrieval
AutoComplete
AutoCorrect
Autofilter with Top Ten
Better drag and drop
Celltips and Scrolltips
Data Map

document icon, and the file opens. If it was created in another program, the menus and toolbars — following

the conventions of OLE 2.0 — change accordingly.

Office 95 programs support the Exchange mail client, letting you send files and messages, access Exchange folders, and attach routing slips without leaving your application.

Mobile users can drag Binders to the Briefcase; if those documents contain Access data, your primary database can be updated with new values on a record-level basis.

If you can't figure something out, even with the new Help engine, a click gets you to a help forum on the Microsoft Network.

— Scott Sponbauer

First Looks

NORTON UTILITIES
from page 46

Norton Antivirus for Windows 95

Virus protection is an important part of maintaining your system. Unfortunately, the existing virus protection products made for Windows 3.x will not work in the 32-bit Windows 95 environment. In some previous releases of DOS and Windows, Microsoft included virus protection, but it has left it up to third parties with Windows 95.

Symantec has come to the rescue with the Norton Antivirus for Windows 95,

or a 32-bit application that Symantec claims effectively protects computers running Windows 95 from existing DOS and Windows 3.x viruses as well as any new ones.

Norton Antivirus for Windows 95 includes a virtual device driver that works in the background monitoring file access and usage for known and unknown viruses.

The Norton Antivirus can scan for viruses in the 32-bit Windows 95 environment

32-bit application that can repair and scan for viruses on a scheduled time. The software can scan compressed files (including those compressed with PKZip), and the database of known viruses can be updated monthly by downloading the latest virus definition file.

Price: \$129

needed space on your hard disk. Its only drawback is a limit of one action per session.

For example, to delete some files and archive others after an Archive Wizard search, you must run the program twice. You can't delete files, then step back to the previous screen to select other files for archiving. This Symantec duo makes the move to Windows 95 less frightening and your work there more organised. Of the two, Navigator extends the reach of Windows 95 further. But Norton Utilities remains an essential choice for detailed system maintenance.

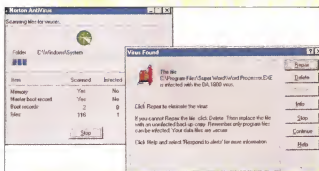
— Peter Scisco

Norton Utilities for Windows 95

Suite of diagnostics and recovery tools adds Windows 95 preinstallation tune-up
Key features: Disk Doctor, System Doctor, Spooler and Archive Wizards
Price: \$199

Norton Navigator for Windows 95

Extends Windows 95's Explorer with multiple customised desktops
Key features: Taskbar and QuickLaunch, SmartFolders, Internet tools, File Archive Wizard
Price: \$169
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Getting in touch with your TASKS and OBJECTIVES

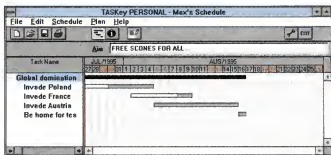
Taskey Personal is a well intended piece of software born of someone who believes meticulous planning and constant review are the key to revolutionising work practices. Like most work practice revolutionaries, however, it's a mix of flak and flavour. There are two rudimentary screens at the back of Taskey: a scheduler and a planner. The beauty of both is they're out-of-the-box easy.

The scheduler is a variation on the old baize-covered wall-boards where you take a piece of elastic from the left of the board (which represents a task) and stretch it across a line of dates, pinning it to the date when you see the task being completed. You repeat this with other lines of elastic until you have a horizontal bar chart full of elastics — which, if I remember correctly, were left stretched for so long that they eventually gave up their elasticity and sagged like strings of cooked spaghetti.

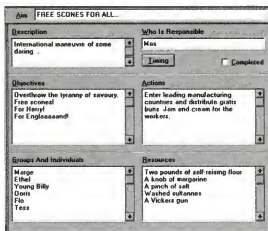
With Taskey, you take out a task slot on the calendar, give it a name and drag a black bar across a line of dates to when it should be completed.

Taskey differs from the board (and lightweight computer schedulers) in that you can subdivide a task into a number of sub-tasks, just like groups of files in File Manager. This benefits because we can jiggle smaller sub-tasks without upending the rest of the schedule.

A Task Timing box is the key to keeping all these tasks updated. Click on a horizontal task bar and tell the Task Timing box how much you've completed in terms of days. The black bar colour drains away as you complete. And that, as far as I can see, is that. Like the board and the elastics, you have a tidy visual reference so when a colleague tries to off-load a job, you can say "Hell no, can't you see? I'm busy that week."



Take out a task slot, give it a name and drag a black bar across a line of dates to when it should be completed



Keep track of aims and objectives and you are well on the way to a very organised life

Then there's the planning screen. Each task has its own plan which you can call up by clicking a button. The plan has lots of text boxes for the sort of guff marketing people get all steamed up about.

There's the "Aims" box, for instance, which the Taskey Tutorial is very serious about if not entirely erudite: "A common problem when doing a task is forgetting the aim (why we are doing the task). Often when we fail to consider the aim, we lose focus and do actions which don't contribute to our aim. In other words, we waste our time and effort."

Along with Aims, we're invited to enter Descriptions, Actions, Objectives and Resources — and if you can find enough stuff to fill all these boxes, and not repeat yourself, then marketing is definitely for you.

By putting your aims and objectives together, you're on the road to altogether more focused work practices achieved within the schedule — a process which works for some people, no doubt. Schedules can be printed and plans can be

exported to a text file, and true to its claims, it takes only minutes to update the Taskey screens.

Taskey personal is \$149. This might look \$100 too steep, but consider the price of project management software — and Taskey is Project Management Software Lite — and it may seem attractive. Besides, if this sort of stuff gets you to "do actions" like you've never done actions before, then it's money well spent.

— Max Anderson

Taskey Personal

Price: \$149

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INFECTION PREVENTION IN THE NEW WORLD.

First, Windows 95 doesn't have any virus prevention or protection built in.

And on the networked, file-sharing superhighway of life, the chances that your PC will be exposed to a virus are far greater

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And guess what? Your old anti-virus software won't work in the brave new world of Windows 95. But thousands of old viruses will.

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Norton AntiVirus is verified to protect you from 100% of all viruses known to be in circulation.*

*Norton AntiVirus
for Windows 95 protects you
from virus attacks.*

But you need more than just protection from a long list of known viruses. Which is all that ordinary anti-virus packages can offer.

Norton AntiVirus also offers you the most complete protection from unknown viruses. Thanks to our unique virus detection technology, Norton AntiVirus spots virus activity in your system and eradicates it before it can do any serious damage.

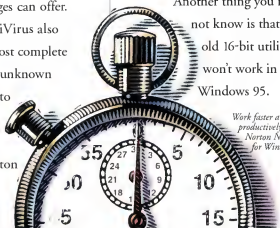
So even if you encounter a virus that was just created yesterday, Norton AntiVirus will find it and stop it.

And when would you possibly need protection from unknown viruses more than in a brand-new operating system?

A 32-BIT OPERATING SYSTEM DEMANDS 32-BIT PROTECTION.

Another thing you may not know is that your old 16-bit utilities won't work in Windows 95.

*Work faster and more
productively with
Norton Navigator
for Windows 95.*



PREVENTION, PROTECTION WINDOWS 95

And the utilities included in Windows 95 itself won't give you much protection in a 32-bit world.

Only native 32-bit utilities can give you adequate system protection in a 32-bit environment.

Which is why you need to upgrade your utilities to Norton Utilities® for Windows 95.

The first thing Norton Utilities will do for you is optimise your system for Windows 95 with a Pre-installation Tune-up.

Then Norton Utilities runs continuously in the background, monitoring your system and automatically launching the right tools to maintain system performance and prevent system crashes.



*Verified in independent test conducted by NCSA and VSUM. Symantec products are already installed. Check with your software. Symantec, Norton AntiVirus and Norton Utilities are registered trademarks are the property of their respective owners. ©1995

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And if something does go wrong, Norton Utilities gives you the data recovery tools users have relied on from day one.

So from the day you install Windows 95, your system is stable and your files are protected.

THE MORE WORK YOU DO, THE MORE WORK NORTON NAVIGATOR WILL DO FOR YOU.

Windows 95 has lots of terrific features to make life easier. Like Plug 'N Play. And long file names.



*Norton Utilities keeps
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You can plug into your Internet connection right from the Norton File Manager. Search for text strings within files at least ten times faster. (In fact, the more files you have and the bigger they are, the more time you'll save.)

And copy a file anywhere on your hard drive or on the network with just one click. Instead of click

click click
click click
click click
(are you
tired of
clicking?)
click click

click click. Which is generally how long it takes to copy a file in Windows 95.

Norton Navigator also lets you use long file names for most applications. And gives

you loads of other time-saving tools like built-in PK-Zip compatible file compression and the ability to delete, move, zip or encrypt from any Open or Save dialog box.

So why waste time wading up and down menus, clicking your life away? Every minute counts.



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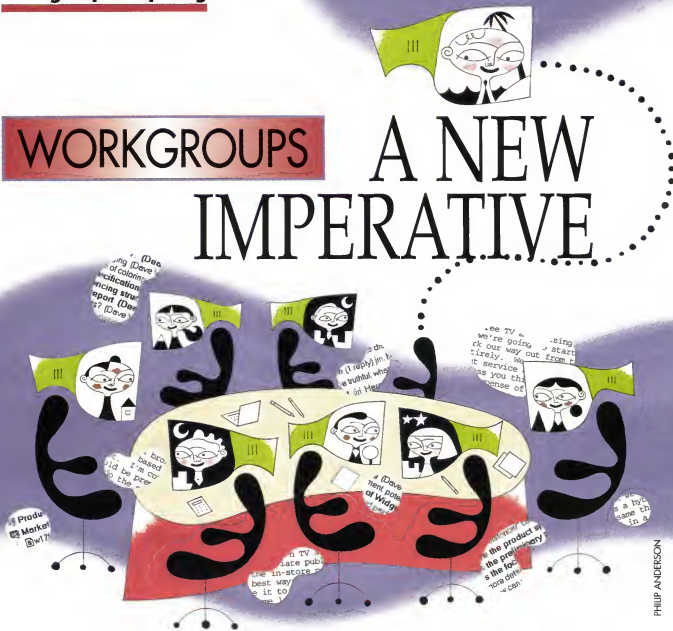
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WORKGROUPS

A NEW IMPERATIVE



We analyse the latest move towards team computing, and canvass what Microsoft, Lotus and Novell are developing to get us working as one

BY SUE BUSHELL

John Donne once wrote: "No man is an island entire of itself; every man . . . is a part of the main."

While he wasn't thinking of the corporate environment of the 1990s at the time, his words seem to suit the restructured businesses of today, where teams are everything and improving interpersonal communication is essential. So it's goodbye personal computer, hello interpersonal computer. Advances in client/server computing, networking, graphical operating systems and messaging systems are converting the PC into a tool for teams.

And this seems only right. In one way or another, whether structured or

ad hoc, most people depend on others to help them perform their jobs. Now workgroup computing technology is facilitating teamwork — from several project members contributing to a group report, to hundreds of sales staff sharing information across geographical boundaries.

With the technology to help them, many pacesetter businesses are restructuring themselves into groups of teams, charged with achieving certain tactical and strategic goals. These teams communicate using electronic messaging and groupware facilities, and collaborate on documents, presentations, and product specs and designs.

Across companies, too, growing >

You're ready to make the move to Microsoft's new 32-bit Windows 95 operating system. The most powerful PC operating system you've ever experienced.

But before you load Windows 95 onto your hard drive, you should upgrade your utilities to the all-new Norton Utilities® for Windows 95.

Then Norton Utilities runs in the background, monitoring your system and automatically launching tools to maintain system performance and prevent system crashes.

Of course, if your system

Even if other applications crash, Norton Utilities for Windows 95 is native, 32-bit utilities. So they'll keep running to help you recover.

No other utilities can offer you all of this continuous, real-time protection in one box.

So make sure Windows 95 and all of your files are safe, stable and protected.

NORTON UTILITIES PROVIDES THE ONLY AUTOMATIC DATA RECOVERY AND CONTINUOUS SYSTEM PROTECTION FOR WINDOWS 95.

The latest version of the utilities you've trusted for years to provide you with bulletproof system protection, data recovery, and hard disk optimisation.

IT'S A 32-BIT WORLD OUT THERE.

What you may not realise is that your current 16-bit utilities won't run under Windows 95.

And the simple utilities found in Windows 95 don't offer sufficient data protection for life in a 32-bit world.

Which is why you need the new Norton Utilities for Windows 95.

The first thing Norton Utilities for Windows 95 will do for you is tune up your system for Windows 95 by optimising your hard drive and cleaning out all those old .TMP files and other files you no longer need.

does crash or you accidentally erase a file, Norton Utilities for Windows 95 gives you the data recovery tools users have depended on from day one.

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Continuously monitors all vital resources and data integrity. Alerts you to impending disaster and recommends action or fixes problems automatically.

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Automatically diagnoses and repairs file system problems using the speed and safety of 32-bit technology.

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NORTON SPEED DISK™

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Install the new Norton Utilities for Windows 95 on your hard disk today.

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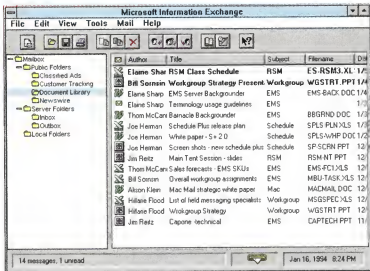
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The beta of Microsoft Exchange has the ability to send and receive messages over virtually any e-mail system



numbers of "virtual" departments are evolving, often geographically dispersed, and comprising individuals from different departments or even organisations. It's all about communication and efficiency, the business watchwords of the decade.

Workgroup software should allow such teams to:

- share timely information captured in desktop applications like spreadsheets, word processors and databases.
- work together on a single document, each adding information or making comments and suggestions.
- track the status of particular documents as they proceed through a business process.

At the same time, team members must be allowed to work with their own desktop productivity tools, such as spreadsheets, word processors, databases and presentation applications — all those packages where team members capture their knowledge, ideas and work-in-progress.

Sharing by definition

To serve these business needs successfully, communication and office automation tools such as e-mail, calendaring, document management and workflow systems have evolved. Such applications give organisations the means to respond to their ever-changing business requirements by using shared applications and shared information.

In this sense, workgroup computing is associated with how people work together, and the use they make of the workgroup computing solution. Although the definitions tend to merge, workgroup computing supposedly differs from groupware, which is associated with enterprise-level solutions, and/or software that needs continuous professional IT support. The main workgroup elements are e-mail, the ability to share documents, document management, scheduling, and information publishing over the network.

Many workgroup implementations are very simple, such as introducing consistent network capabilities and standardised desktop productivity applications. But even such basic moves can cause a major transformation in the way teams work.

Today's most advanced suites make communication, collaboration and co-ordination a principal design factor. Workgroup support can be a feature of the product itself, using such techniques as version control and annotation, or it can make use of a communications platform for document routing.

E-mail underpins all workgroup computing. Nothing is as fundamental to the success of a workgroup as its ability to communicate, and e-mail manages electronic communications for the workgroup. Central to workgroup products is support for common messaging environments. Since a

suite will often be used in a variety of environments, it should support common mail transport protocols. These include Mail Application Programming Interface (MAPI) and Vendor Independent Messaging (VIM).

The perfect e-mail client has a text editor that works like your word processor, so that you don't have to learn a new approach to text editing. It has rules that are simple to program, allowing you to automate as much of the work as possible. Your e-mail program should be easy to figure out, and the features you use most often, like send and reply, should be a few clicks or keystrokes away.

Vendor momentum

With the growing popularity of groupware, many vendors have announced a future path to groupware excellence, or they are seeking strategic alliances which will help them deliver products to this growing market sector. Both Microsoft and Novell made public statements recently about future workgroup product lines, while IBM is hanging its future on Lotus's leadership in the groupware market.

Microsoft announced Microsoft Exchange, an environment for information sharing that will be central to its workgroup computing strategy. Novell, with the acquisition of WordPerfect, is adding WordPerfect Office and Informatics to its existing MHS-based messaging capabilities.

Microsoft

Microsoft says it is committed to making workgroup features available in all applications, so that workgroup computing becomes a natural part of the way people use computers.

The company says its workgroup computing strategy is designed to address the concerns of corporate users, application developers, systems integrators, consultants and others. These target groups apparently told Microsoft that any workgroup computing strategy should allow them to use existing IT investments; provide open standards and interfaces and a smooth migration path to new technologies; and ensure freedom of

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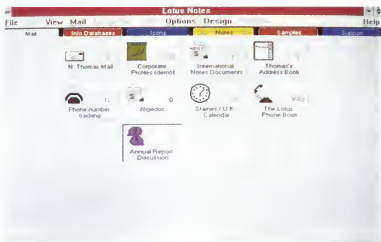
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Lotus Notes walks the line between groupware and workgroup software, providing e-mail, databases and multiserver and wide-area connectivity



choice by not locking them into a single vendor's solution.

Microsoft's workgroup computing strategy is therefore focused on creating an open workgroup development platform in Windows, and on delivering applications and development tools that can take advantage of the open architectures provided by leading operating systems.

The Microsoft Workgroup add-on for Windows added integrated networking capabilities to the Windows 3.1 interface. Windows for Workgroups comes with the Microsoft Mail for PC Networks client, designed and built for the mobile professional. Microsoft Mail is ideal for those using portables and docking stations, or needing to access their mailbox from multiple locations.

Under Windows for Workgroups you can also share resources like directories and printers via File Manager and Print Manager, and monitor how shared resources are being used.

You also get the Microsoft At Work PC Fax, so you can send and receive faxes whether or not you are using a network; and you can schedule group appointments on-line with Schedule+. A Local ClipBook Viewer lets you store information you want to move, save or use in other places via the Local ClipBook, and you can use the ClipBooks of others to share information.

Windows 95 presents its messaging and communications tools in a single-user interface. The Microsoft

Exchange Client, an integrated messaging and workgroup communications system, provides universal e-mail, fax and information sharing. The Exchange Server is due out before year's end.

Microsoft Exchange includes the following features:

- The ability to send and receive rich-text e-mail messages over virtually any e-mail system, including the Internet.
- The ability to send faxes directly from the desktop, and receive incoming faxes directly in Microsoft Exchange's universal in-box.
- A built-in e-mail system to quickly get workgroups up and running, including the Microsoft Mail Post Office. The system can be upgraded to a full Microsoft Mail Server or Microsoft Exchange Server to connect multiple workgroups or the entire enterprise.
- The ability to move messages and documents between the file system and mail folders, and to organise documents using custom views with searching and filtering capabilities.
- Support for taking advantage of MAPI-enabled applications, ranging from desktop productivity to workflow and document management.

Microsoft Exchange is built on the MAPI architecture, so it can work with many different e-mail systems and information services simultaneously, and provide a universal in-box for communications between individuals and workgroups.

Windows 95 ships with a number of components which represent the first complete implementation of the extended MAPI architecture, including Microsoft Exchange client, Personal Address Book, Personal Information Store, MAPI 1.0, Microsoft Mail drivers, Microsoft At Work Fax drivers, Microsoft Internet Mail drivers and optional third-party MAPI drivers.

Lotus

The original workgroup tool from Lotus, cc:Mail for Windows, offered a strong set of administrative tools, an enhanced Windows client program, and extremely strong remote access features. One major strength was the ability to span multiple post offices with relative ease.

Then came Lotus Notes — more a groupware product than a workgroup product — that featured Notes Mail. Notes provides an e-mail system, a large amount of workgroup functionality, the Notes discussion database and extensive multiserver and wide-area connectivity.

While many users buy Lotus Notes for its workflow functionality, document management soon becomes particularly important to most users. Notes led the workgroup field by offering a set of services never previously dreamed of, including a document database, free text retrieval, cross-platform connectivity, sample workflow applications and document image processing.

Much of the power of Lotus Notes lies in the fact that it allows people to develop and deploy relatively simple applications very quickly and at a reasonable cost, often across traditional organisational boundaries. To a much greater extent than Microsoft, Lotus's Notes strategy revolves around the needs of enterprise and "interenterprise" computing.

Lotus says that although the new class of team-oriented applications have been built on top of groupware platforms and messaging infrastructures for vastly enhanced interorganisational productivity, what has been missing is integration with the desktop tools that individuals use to perform a business process. ▶

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Now it has attempted to address this gap with NotesSuite, an integration of its Windows SmartSuite product and a new version of Notes. This means you get, in a single package, tightly integrated desktop productivity tools like the 1-2-3 spreadsheet, Approach database, Freelance Graphics presentation package, WordPro word processor and Organizer personal information manager, all built around a tactical hub known as Smart Center. NotesSuite also comes with a complete set of team computing applications, like shared document management, range routing, version management, sticky notes, contact management and customer service, that are ready to use out of the box. This means the work of many employees, captured in the application suite, can be tied together under Notes.

Each desktop product is fully integrated with Notes, exploiting the Notes API and Notes/FX 1.1, which advances the ability to embed the files of other Lotus applications into Notes. In other words, if you update a document in either Notes or 1-2-3, for instance, the change is reflected in both documents.

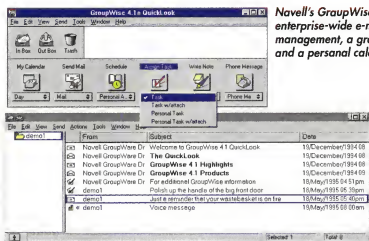
The acquisition of Lotus by IBM means IBM has adopted Lotus Notes as its groupware client and mail, messaging and server platform, and Lotus SmartSuite as its desktop suite.

Novell

In July Novell told the world about its plans to take over from Lotus and Microsoft in the burgeoning groupware market.

By year's end Novell plans to deliver products based on GroupWise and SoftSolutions that are designed to provide highly sophisticated means of accessing and sharing corporate data, and a more logical means of executing and automating desktop and communications tasks.

Eclipse, the first element of Novell's Collaborative Computing strategy for workgroups computing, was previewed at the BrainShare conference in Salt Lake City, Utah. It will provide a Work Management Framework, a client or universal in-



Novell's GroupWise provides enterprise-wide e-mail, task management, a group scheduler and a personal calendar

box from which users will access all desktop and communications applications; an Information Management System based on Novell's existing GroupWise message store and SoftSolutions products; a Communications Management System, which will use a revised version of the GroupWise Message Transfer Agent; and an Administration System based on Novell's ManageWise and NetWare NWAdmin tools.

SoftSolutions, targeted at workgroups and the entire enterprise alike, is Novell's document management system. It offers search and retrieval services for rapid document access; library services to automate the filing, retrieval, withdrawal and profiling of documents on the network; security services to protect data; version control that tracks multiple versions of documents; archival and deletion control; and integration with both applications and networks.

SoftSolutions 4.0a adds compatibility with the Open Document Management API (ODMA), a connectivity standard that allows customers to use their document management system with more business applications. It features an integration manager that gives users and system administrators a quick and flexible way to specify when and how SoftSolutions interacts with applications.

GroupWise, meanwhile, is an integrated, enterprise-wide workgroup information transfer package. It provides fast, efficient enterprise-wide e-mail, personal calendaring, group

scheduling and task management. A single GroupWise database stores all schedules, e-mail messages and tasks. Users have one in-box, which includes proposed meetings, e-mail messages, and any tasks they have been assigned. Users can permit other GroupWise users to view the details of their schedules. Resources such as meeting rooms and audiovisual equipment can be scheduled on a first-come, first-served basis, or through a proxy who must confirm reservations.

GroupWise eliminates parallel messaging infrastructures by rationalising multiple infrastructures into a single system; reduces administrative workload and costs via NetWare Directory Services (NDS) integration; provides high performance at a lower cost by taking advantage of a NetWare server and eliminating the need to have a dedicated messaging server; and uses rules to take care of sorting, filing, forwarding, delegating and other message management functions.

Maturing products

Surveys show satisfaction with workgroup computing is high, although it may be some time yet before workgroup computing systems become a fundamental part of our working life. But the workgroup revolution is clearly underway, and vendors of many persuasions are beginning to attack what they see as a growing sector of the market. Even though workgroup products have yet to reach maturity, the benefits are already there for the taking. ■



JAMES PORTO

Multimedia presentations — medium and the message

Business presentations are designed to inform rather than entertain, but multimedia generates what every presentation needs — your audience's attention

By Robert Lindstrom

To see a roomful of business people fidgeting like a bunch of five-year-olds, try giving a traditional presentation. It's no wonder that attention spans are shorter than ever: in a world of music videos and television commercials filled with alluring imagery and fast-paced camera work, a few pie charts projected on a screen won't captivate many people.

Dress up those same pie charts with animation, video, music and sound effects, though, and you stand a good chance of grabbing your audience's attention — and getting your message across. Besides being entertaining, multimedia helps you convey ideas more quickly than old-fashioned presentations ever could. If you're announcing a sales figure that's worth celebrating, for example, you can drive the point home by adding, say, a sound track full of stirring music and applause to your show.

Once the domain of high-end, expensive applications aimed at communications professionals, multimedia has worked its way into nearly every presentation package on the market, and you don't need the skills or the bankroll of a Steven Spielberg to give your shows a glitzy movie touch.

But it's important to understand that there are really two distinct classes of presentation products: packages that have been built for multimedia from the ground up, and programs of longstanding popularity that have been retrofitted for it.

The first category is a new breed of program — including Macromedia's ▶

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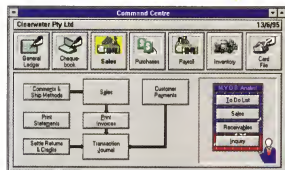
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Best Buys



None of the presentation products we evaluated is equally adept at handling both multimedia and conventional shows. For this reason, we've chosen two products as Best Buys — one for multimedia shows, and another for traditional ones.

Of all the packages, **Gold Disk's Astound 2.0** does by far the best job of blending old-fashioned tools with potent multimedia features. Multimedia experts will like its sophisticated interactivity options and other advanced features; the fact that it comes with Astound Studio — a fine suite of multimedia editing tools on a CD — closes the door on other multimedia contenders.

Harvard Graphics 3.0 is our choice as the best all-round conventional presentation package. From its crisp, appealing user interface to the easy-but-powerful drawing features of Harvard F/X, the package delivers with plenty of power and a low learning curve. Its one weak spot — middling support for multimedia elements like animation and video — is shared by all the traditional packages we tested. Otherwise, it does nearly everything well.

Action and Gold Disk's Astound — that lets you import multimedia elements such as video, animation and sound, in much the same way that conventional presentation programs allow you to bring in still images and text. These products also add multimedia touches to standard presentation features, such as the ability of Action and Astound to create charts that fly onto the screen one piece at a time.

The old guard

The new-wave packages compete against veteran contenders such as Lotus's Freelance Graphics, Software Publishing's Harvard Graphics and Microsoft's PowerPoint. As these older packages have evolved, their developers have worked hard to make creating presentations easier and more effective. They now incorporate features that assist presenters with content development, artistic design and workgroup collaboration.

At the same time, though, these old-line programs have so far made only modest efforts to embrace multimedia. They rely mostly on OLE (Object Linking and Embedding) to pass control over to external multimedia applets. You can import and play media files

with OLE, but you have very little control over the display and timing of the objects.

OLE also makes strenuous demands on your system resources, which can lead to memory conflicts and synchronisation problems. One reason conventional programs have been slow to adopt multimedia is that most are sold primarily as parts of suites: Freelance Graphics comes with Lotus SmartSuite, PowerPoint with Microsoft Office, and Presentations with Novell PerfectOffice.

Since purchasers who acquire presentation software in a suite are likely to use it only from time to time, the developers have emphasised making these programs simple to learn (and relearn), rather than

adding cutting-edge features such as multimedia.

Indeed, we found that, on the whole, the conventional programs still deliver better on-line help, ready-made templates and other hand-holding devices than their multimedia-focused competitors. Such assistance may prove especially important if you use your presentation program only occasionally.

It's also a mistake to discount such conventional features as outlining, which lets you work with your presentation's topics in a word processor-like screen that makes it possible to concentrate on your show's overall structure. You may also want the ability to print out speaker notes (notations you consult as you conduct a show) and handouts (printed summaries for the audience).

Decision time

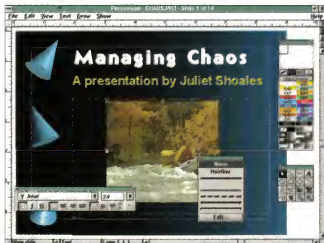
For all the strengths of the conventional packages we evaluated, the multimedia specialists — especially Astound, our Best Buy among them — should be at the top of your shopping list if you need multimedia features that go beyond the basics. If, on the other hand, you want a package that makes creating simple presentations as hassle-free as possible, the conventional packages still deserve consideration.

Harvard Graphics is our Best Buy among the old-line programs, but if you use one of the big three office suites, test-drive the presentation package in it before buying a stand-alone product. PowerPoint, Presentations and Freelance are all pleasing general-purpose choices, and fell only slightly behind Harvard Graphics in our tests. The ultimate presentation software package — one that blends simplicity and sophistication and that handles traditional and multimedia features with equal panache — has yet to be invented. Creating an effective presentation will always take time, effort and careful thinking, but the best packages here can help you do it in style.

All packages reviewed here were evaluated in their Windows versions.

Adobe Persuasion 3.0

The Macintosh version of Adobe Persuasion has long been a favourite of graphics professionals. As it has evolved and added a Windows version, ▶

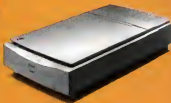


Persuasion offers desktop publishing — like graphics controls, including floating palettes that allow you to specify fonts, lines and colours

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Persuasion has become easier to use for businesspeople who create presentations only occasionally. Even so, Persuasion continues to be most useful for full-time artists who create presentations for others to give, and for those who need precision layout features such as automatic kerning and multiple rulers. It offers strong graphics importing and editing features, and its charting module is both thorough and loaded with options.

On the multimedia side, the features that set Persuasion apart from its conventional competitors are its inclusion of QuickTime for Windows and its ability to import video clips without using OLE. This lets videos run very smoothly and allows you to create shows for playback on Macs as well as PCs.

Persuasion handles sound well in comparison to other traditional packages. For example, you can choose to play only part of a sound clip and to play a music file across multiple slides. With a little work, you can employ the program's sophisticated layering capabilities to add animation effects to charts and tables. And Persuasion's interactivity tools let you program on-screen objects to jump to another slide, presentation or application when clicked.

Persuasion also offers heavy-duty output options, including advanced tools such as colour-management controls. While most users won't need these features, they make the package worth considering if you want your presentations to be as visually perfect as possible.

Pros: Professional-strength layout and design tools, better-than-average multimedia, cross-platform capability

Cons: No OLE 2.0 support, non-interactive tutorial, limited selection of templates

Price: \$575 CD and disk

Adobe Systems

Phone: (02) 418 8488

Gold Disk Astound 2.0



Astound 2.0 nearly grabs the brass ring of presentation software, by combining the strengths of conventional slideshow packages —

Five tips for great multimedia presentations

1 Borrow artistic expertise
While you don't need to be an artist to create appealing multimedia presentations, you may end up with an amateurish-looking production if you're not careful. Use the templates and clip art that most presentation packages offer, and consider buying additional clip art if you've got special needs.

2 Know your player program
Virtually every presentation package provides a player program you can use to play your screen shows on PCs that don't have the full package installed. But since these players don't always support all the features of the presentation package itself, make sure you know what they can and can't do.

3 Avoid sensory overload
It's tempting to cram as much motion and sound as you can into your

shows. But they'll be more effective if you include media clips only when they make a point that can't be made through conventional means alone.

4 Bypass sluggish CD-ROMs
Keep in mind that CD-ROMs — even quad-speed models — aren't as fast as hard disks. To avoid jerky playback of media clips, copy them from the CD to the PC's hard drive before adding them to your show.

5 Tailor multimedia to your PC
If your PC is showing its age, design your shows to reduce hardware needs. Most animation formats play fairly briskly even on older systems that can't handle video, and if you're tight on disk space, use MIDI music files rather than .wav ones — they're far more compact.

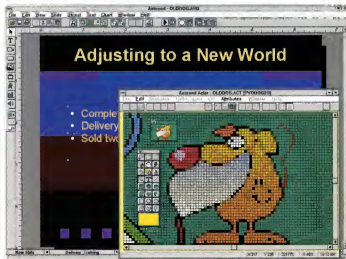
— Harry McCracken

including automated templates, slide masters and outlining — with all the tools you need to add full-blooded multimedia to your shows. While it's not quite as easy to use as the best conventional packages, Gold Disk's Astound easily merits a Best Buy recommendation.

Like conventional presentation packages, Astound adheres more or less to a slideshow metaphor. But it also provides timeline editing, which lets you precisely synchronise sound clips, animations and other multimedia objects within each slide.

Astound's tools for creating three-dimensional, animated charts go far beyond those of the competition. You can assign individual effects, timing and speeds to the elements within a chart, allowing you to emphasise particular data. You can also rotate charts in 3-D space to any perspective.

The package's handy Headstart preformatted presentations help you rapidly build shows that address such typical topics as financial reports and dealing with a crisis, or you can choose one of Astound's templates and simply plug in your own multimedia elements. ▶



Astound comes with a complete set of multimedia creation tools, including the Astound Actor animation program

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- PCMCIA III attached (SKD III-Stereo)

Built-in
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The slideshow optimiser function can then analyse your presentation, suggest ways to improve its performance, and make the changes for you automatically.

One of Astound's biggest advantages is that it comes bundled with Astound Studio, a suite of applications that provides all the tools you need to create, edit and manage graphics, animation, video and audio. None of these utilities match the best stand-alone products in their class, but they're all solid and useful and go far beyond anything offered by other presentation packages.

Astound could still learn some tricks from the electronic help offered with the best conventional packages. Understanding how to use multimedia effectively is a bigger challenge than learning to create an ordinary slideshow, but Astound doesn't provide an on-line tutorial or any special advice on adding sound and motion to your presentation. Its CD-ROM of multimedia elements is also a bit erratic in quality.

Despite these relatively minor flaws, Astound 2.0 sets a new standard for multimedia presentation packages. Gold Disk has given developers of both traditional and multimedia programs something to shoot for in their next releases.

Pros: Easiest-to-use multimedia package, outstanding templates, full-featured tools for creating multimedia elements

Cons: Minimal design guidance, no on-line tutorial, inconsistent clip media quality

Price: \$399 on disk and CD

Desktop Utilities

Phone: (06) 239 6658

Lotus Freelance Graphics 2.1

Lotus Freelance Graphics 2.1 pioneered many of the usability features, such as automated templates, that nearly all its competitors have since adopted. While the package — which most users get as part of the Lotus SmartSuite — no longer holds a huge edge in ease of use, it is still a very accessible product, with an impressive range of conventional presentation tools, including more than 60 SmartMaster templates. And the program's interactive tutorial is entertaining. However, as with the other traditional packages reviewed, its multimedia features are so-so at best.

The package gives you a wide selection of chart types and lets you see a preview of how changes will affect a chart's look before you commit to them. You also get an appealing set of transition effects, including clever, animated theatre curtains and window shades that open and close to reveal and hide the contents of your slides. But we found that the transitions, which have no timing controls, occurred somewhat too quickly on our test system.

Although it's not a full-fledged multimedia presentation product, Freelance has more built-in multimedia capability than PowerPoint and Presentations. The program includes two simple applets in the toolbar that you can use to launch sound and video through



Lotus Media Manager is a simple playback utility that gives Freelance most of its multimedia capabilities

OLE. Like other OLE-reliant programs, Freelance doesn't give you much control over playback, but an option allows you to set the number of times a file plays or loops when triggered, and you can turn any on-screen object into an interactive button that jumps to another slide, launches an outside application, or plays a multimedia object.

Freelance gives you just about everything you need to easily create conventional slide shows. But if you need high-powered multimedia capabilities, think about moving to a package designed specifically for the role, such as Astound.

Pros: In-depth tutorial and other helpful features for beginners, workgroup and e-mail functions, sound clips

Cons: Modest multimedia capabilities, no OLE 2.0 support

Price: \$549

Lotus Development

Phone: (02) 350 7700

Presentations chase Windows 95

It's clear from our peeks at upcoming Windows 95 versions of PowerPoint and Freelance that both Microsoft and Lotus envision on-screen delivery and multimedia as dominating the future of business presentations.

According to Microsoft, its next version of PowerPoint, dubbed PowerPoint for Windows 95, will include such features as pre-programmed interactive buttons, the ability to animate objects, and new templates with built-in transitions. The package will be able to generate meeting notes during a presentation, as well as an action-item list at the show's end. Similarly, Lotus intends to make its Freelance Graphics more useful as an on-screen interactive business tool. The

Windows 95 version will stress the concept of teamwork and collaboration, both in the creation of presentations and in the role they play as facilitators for individual and group communications. Team members reviewing a presentation can place colour-coded comments on the screen, using a "sticky notes" metaphor.

Lotus is developing additional SmartMaster templates with built-in multimedia elements, and the program will offer drag-and-drop sequencing controls for setting the order and timing of actions.

The package will provide advice on the content of presentations, which can be customised to your company's requirements. The Windows 95 version will also include an integrated .avi movie player.



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Using Action's powerful timeline editor, you can precisely synchronise video, sound and other multimedia elements

Macromedia Action 3.0

Macromedia Action was born to do multimedia. The program's kinship with Director, Macromedia's high-end authoring tool, is apparent in the ease with which it lets you integrate text, graphics, sound and motion.

Action dispenses with the slide-show metaphor of most programs. A presentation can be made up of a single sequence with multiple elements, or you can build interactive shows that incorporate separate scenes, then use ▶

FEATURES Astound and Harvard Graphics on show

PC WORLD

● = Yes ○ = No



Standard features	Adobe Persuasion 3.0	Gold Disk Astound 2.0	Lotus Freelance Graphics 2.1	Macromedia Action 3.0
List price	\$575	\$399	\$549	\$495
Minimum/maximum disk space required (Mb)	16/31	11/30	7/23	10/17
Clip art and multimedia elements	500	1,364	500+	1,000+
Support for OLE 1.0/OLE 2.0	●/○	●/○	●/○	●/●

Conventional presentation tools

Outliner	●	●	●	●
Handouts/speaker notes	●/●	●/●	●/●	●/○
Chart types	84	31	108	32

Multimedia and screen-show features

Maximum colour depth	24-bit	24-bit	8-bit	24-bit
Transition effects	15	45 slide, 100+ object	32	46
Interactive buttons or objects	●	●	●	●
Sound editor	○	●	○	●
User-definable object animation	●	●	○	●
Timeline synchronisation of media	○	●	○	●
Graphic formats	BMP, CDR, CGM, DIC, EPS, GIF, PCD, PCT, PCX, PLT, PNT, TIFF, WMF, WPG, XLC	BMP, CGM, DIB, GIF, GRA, PCD, PCX, PICT, RLE, TIFF, WMF	BMP, CGM, DRW, DXF, GEM, GIF, PCX, PIC, TGA, TIFF	BMP, EPS, GIF, PCD, PCX, TIFF, WMF
Animation formats ¹	PIC	AAS, AIM, AVI, AWA, AWM, FLC, FLI, SCM	LSM	FLC, FLI
Video formats ¹	MIDI, MOV	DVI, MOV	through OLE only	AVI, MMM, MOV
Sound formats ¹	WAV	CD, MIDI, WAV	WAV	CD, MIDI, WAV

¹ Formats supported out of the box; programs that offer OLE can incorporate virtually any media type using external applets and drivers

the program's interactivity features to let users jump from one scene to another when they press a key or click an on-screen button.

By sliding coloured bars around in Action's timeline view, you can specify exactly when the elements in each scene appear, and how long they stay on screen.

Action's impressive animation features let you create animated charts, cause objects to travel along a multi-point path, and apply animated effects to any on-screen element. However, the

package lacks Astound's powerful tools for creating animations, video clips and still images from scratch.

Action 3.0 still can't perform automatic greyscaling to optimise black-and-white printed pages or print out speaker notes, but it does have an outliner and a spelling checker. The CD-ROM edition also has excellent ready-to-use multimedia elements.

For multimedia, Action offers much more than any of the conventional programs we tested. But Gold Disk's Astound matches nearly all

of Action's abilities, while adding comprehensive traditional features and multimedia creation tools that make that product a far better value.

Pros: Precise timing controls, built-in animation tools, high-quality CD-ROM of clip art and multimedia files

Cons: Limited printing and multimedia creation features

Price: \$495 on floppy and CD

Firmware Design

Phone: (047) 21 7211

FEATURES *continued from previous page*

PC WORLD

● = Yes ○ = No



Standard features	Microsoft PowerPoint 4.0	Novell Presentations 3.0	SPC Harvard Graphics 3.0
List price	\$500	\$659 ²	\$495
Minimum/maximum disk space required (Mb)	11/35	12/32	9/24
Clip art and multimedia elements	1,100	1,154	700+
Support for OLE 1.0/OLE 2.0	●/●	●/●	●/○
Conventional presentation tools			
Outliner	●	●	●
Handouts/speaker notes	●/●	●/●	●/●
Chart types	84	48	88
Multimedia and screen-show features			
Maximum colour depth	24-bit	24-bit	24-bit
Transition effects	39	33	51
Interactive buttons or objects	○	○	●
Sound editor	○	○	○
User-definable object animation	○	○	○
Timeline synchronisation of media	○	○	○
Graphic formats	ADI, BMP, CDR, CGM, DRW, EPS, HPGL, PCX, TIFF, WMF	BMP, CGM, CHT, DXF, EPS, PCX, PIC, PPT, SHW, TGA, TIFF, WMF, WPG	BMP, CDR, CGM, CHAT, CH3, CRW, EPS, GIF, PCX, PhotoCD, PICT, PICT2, TIFF, WMF, WPG
Animation formats ¹	through OLE only	through OLE only	AIM, SCM, SWM
Video formats ¹	through OLE only	through OLE only	AVI, AVS
Sound formats ¹	through OLE only	CD, MIDI, WAMI, WAV	MIDI, WAV

¹ Formats supported out of the box; programs that offer OLE can incorporate virtually any media type using external applets and drivers

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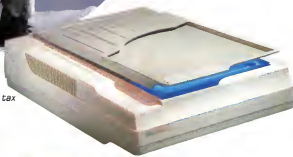
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Microsoft PowerPoint 4.0

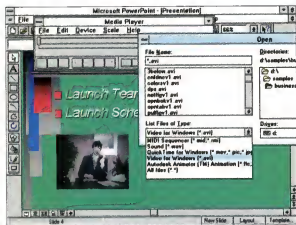
Today's presentation packages have made great strides in usability — and Microsoft's PowerPoint 4.0 may be the most inviting of them all. (PowerPoint is usually bought as part of Microsoft Office.) From its enjoyable tutorial to its preformatted presentations and context-sensitive help, the program excels at getting first-time users up and running quickly. There's one big catch, though: its built-in multimedia features are the skimpiest of any package we evaluated.

PowerPoint's on-line assistance and ease-of-use touches compare well with those of SPC's Harvard Graphics, although it lacks many of Harvard's advanced features, such as network conferencing. PowerPoint's Auto-Content Wizard asks you questions about the subject of your presentation, then formats a show to match. Similarly, the Pick a Look Wizard can do much of the formatting of on-screen shows, handouts and other presentation elements, based on your answers to its queries.

PowerPoint relies on bundled applets, including WordArt and Microsoft Graph, to handle tasks such as special text effects and charting. While the applets provide most of the features you'd expect, a few are missing: you can't apply gradient tones to text blocks, for example, or create table charts. The library of transition effects, although large, is somewhat basic and utilitarian.

PowerPoint is the only package we tested that has no menu choices for multimedia; the only way to add media clips to a presentation is to insert them as OLE objects that are actually played back by Windows's Media Player utility. The program also lacks interactivity, except for the ability to launch external applications by inserting them into presentations as OLE objects.

Clearly, multimedia is not PowerPoint's strength. If you are looking for a conventional package with multimedia



Since PowerPoint lacks built-in multimedia features, you use OLE and Windows's Media Player to insert videos, animations and sound in your shows

features, Harvard Graphics or Lotus Freelance will serve you better.

Pros: Easy to use, strong on-line assistance for beginners, rehearsal feature, good text handling

Cons: No built-in multimedia support, modest charting and drawing tools, uninspired template designs and transitions

Price: approximately \$500

Microsoft Australia

Phone: (02) 870 2100

Novell Presentations 3.0

If there were an award for Most-Improved Presentation Software, Novell Presentations (a part of the PerfectOffice suite, and formerly called WordPerfect

Presentations) would be the uncontested recipient. Version 3.0 elevates what was once an also-ran into a major contender; if not for the package's weak multimedia and interactivity, the program might very well have been a Best Buy. While earlier versions of Presentations were sluggish and frustrating, the new release is as responsive as a well-trained dog. Its ease of use, too, has improved dramati-

cally: an effective start-up routine leads you step by step through creating a presentation. You select a master background (from among some of the most attractive choices we've seen) and then choose a template. You can also have the program's Show Expert help you develop the content of your show. Presentations's is the best designed of all the content guides, although it would be nice to have more than 11 types of presentations to choose from.

Presentations 3.0 also stands apart from most of its competitors with its sophisticated and easy-to-use drawing, painting and effects features. Because it grew out of DrawPerfect, an illustration program, Presentations contains such professional-level features as gradient text fills, 3-D effects, Bezier and spline tools, and emboss and blur bitmap effects. You can also warp objects or add a perspective effect, and the tools don't require any artistic skill on your part.

Unfortunately, the program shares many of the same multimedia shortcomings as its traditional-presentation peers. Its transition effects are easy to add but uninspired. You can add sounds to slides but not to individual objects. There is no path or chart animation, and the only way to add animation or video is by using OLE 2.0 to get Presentations talking to an external program, such as Windows's Media Player. Worse than these inconveniences, though, is the program's clumsy approach to interactivity. You can't create on-screen interactive



Presentations's show expert can build a basic show for you, based on your choice of 11 common presentation topics

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- Henry Ford -

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buttons or other objects, for instance; the best you can do is assign actions to particular keystrokes.

Presentations remains attractive if you need meaty graphics tools and can live with its minimal capacity for multimedia and interactivity. It's also the first package that users of WordPerfect and other Novell desktop applications should investigate, since it's very similar in design to its siblings in the PerfectOffice suite.

Pros: Easy yet sophisticated drawing tools, excellent content guide, well-designed templates

Cons: Limited multimedia support, poor interactivity tools

Price: Presentations 3.0 is not available as a stand-alone product; it is a component of Novell's PerfectOffice suite (Standard), which lists for \$659 or \$279 for an upgrade

Novell
Phone: (02) 9925 3000

SPC Harvard Graphics 3.0

If you're new to presentations and are looking to get a leg up from your software, Software Publishing Corporation's Harvard Graphics 3.0 not only gets you into the saddle, it speeds you down the track and through the finish line as fast as any program on the market. Its combination of power and ease of use makes it equally serviceable for beginners and experienced presentation

More multimedia power

Here are a couple of specialised tools that you can use to supplement the features in your primary presentation program:

HSC Software's HSC InterActive 2.0 (which lists for \$437) is a modified version of the high-end IconAuthor authoring product and uses an icon-oriented flowchart metaphor for developing presentations and training programs. Its strength lies in its highly visual organisation of your show's interactive structure and media events.

Call Polaroid Computing, (02) 9950 7060.

tation creators, and it's our Best Buy among the traditional packages.

We're particularly impressed by the range of ways in which Harvard Graphics helps ensure that your presentations are coherent, well organised and good-looking. A set of on-line tutorials introduces you to concepts such as building a chart, working with text and delivering a presentation; you can then make use of the package's Quick Presentations — highly useful guides to building presentations with specific themes, such as creating a business plan. Harvard's Advisor help system guides you through each major step of creating a presentation.

When you've finished roughing out a presentation, the unique Advisor Design Checker feature automatically evaluates your use of colour and graphics, letting you know when you may have violated a rule of good design.

While Harvard offers the best and most extensive design advice of any package we tested, don't expect miracles: the product's suggestions are aimed at beginners, and in our tests the Design Checker did not always follow its own advice when making changes to our shows.

Harvard's charting features allow you to format data into a large variety of chart types, with an unusually wide range of customisation options. More advanced users may be interested in

SPC's Harvard Spotlight (\$199) works with Freelance Graphics, PowerPoint or Harvard Graphics to give presenters a special screen that displays a timer, preview of upcoming slides and other information to help conduct a well-paced, confident show.

The program works either with two PCs connected by serial cables or with a single computer using a special dual-output video card.

Call Merisel on (02) 9936 1000.

— Robert Lindstrom and Harry McCracken

Harvard's unique conferencing ability, which allows you to distribute a single presentation in real time to as many as 64 computers over a network. The presenter can control and annotate the show while others watch, and can pass leadership to any participant in the conference.

Add the package's well-designed templates, powerful interactivity features and excellent drawing module (Harvard F/X), and you have everything you need to create conventional slideshows quickly and easily. But if it's multimedia you're after, you'll have to keep your ambitions in check. While Harvard Graphics is the only one of the conventional products to include a built-in animation player, it provides just a few animations to choose from, and they're difficult to position on the screen. The package also includes a video player applet, although the process for specifying a clip's position and sound level is cumbersome.

Still, this package shines as an all-around conventional presentation product. In a software market dominated by suites like Microsoft Office, it's rare for a stand-alone product to rise above its competition in usability and features — but Harvard Graphics does just that.

Pros: Best combination of power and ease of use in a conventional package, comprehensive on-line help and design advice, Design Checker feature, multi-user network support

Cons: Modest multimedia features, design advice may be too elementary for experienced users

Price: \$495

Merisel

Phone: (02) 9936 1000 ■



Harvard Graphics's design help and other ease-of-use features shine, but the program also offers basic multimedia, including the ability to play animation clips

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SIGHT AND SOUND EXPLOSION



Accounting **to taste**

What your business does will determine its accounting load, and therefore the accounting software it needs.

We review four DOS and Windows packages

By Veechi Curtis

Choosing accountancy software for your business is like trying to get through a difficult obstacle course: it's badly mapped, full of traps and if you get it wrong you are apt to end up right back where you began — with a lighter wallet.

Accountancy software provides many shining examples of the most unintuitive, outdated, error-prone programming you could imagine. Much of it has come from the combined efforts of accountants and programmers, and the user who fails to come to grips with the resultant accountant-speak is usually described as someone who "needs to attend our special training course".

But things are changing, and for the better. This review looks at some of the better, more stable packages on the market, in both the DOS and Windows environments, but with accountancy software there is no package that is the best. The accounting software solution that suits your business depends on a several factors:

- **What industry are you in?**
Service (hospitality, professionals), manufacturing, wholesale, retail, manual trades, contract work
- **How many people will need to use the system at one time?**
This is not necessarily related to how many employees you have!
- **What is the maximum expected volume of transactions per year?**
Consider the quantity of stock lines, suppliers and customers, and not only

how many invoices, but the average number of lines per invoice. Estimate how many cheques, journals, payments and receipts are processed.

- **How many months of transaction history will you need to maintain?**

MYOB for Windows 5.0

MYOB is a single-user Windows system. It is a fully-integrated General Ledger package, with Customers, Suppliers, Stock, Cashbook, General Ledger and a basic Contacts Manager. There is an optional Payroll Module for \$200.

MYOB stands out against other software for its genuine user-friendliness. For example, when you record an invoice it instantly updates every module — no batch postings. This means that you can look up your running bank balance or your profitability at any time. If there is an error, you can click on the transaction and edit it. (Editing can be password-protected.) In MYOB, however hard you try, you can't *really* do much damage. Your Profit & Loss Statement will always balance, as will your balance sheet and trial balance.

MYOB is particularly good for people in the service industries, professionals and tradespeople. It has a very easy-to-use job costing system, and a small but good range of job costing reports. This means a builder can determine the profit on each house he builds, without having to create a new general ledger account for each expense category on each house. Or a guesthouse can define its business in terms of cost centres, and generate Profit & Loss Statements for the dining component of the business, for the accommodation component, and for the two combined.

For retail/wholesale/manufacturing you will need to examine MYOB more carefully to make sure it can meet your needs. The pricing options are fairly limited; there is no ▶



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SOMEWHERE ON HIS DESK ARE TWENTY HOT PROSPECTS.

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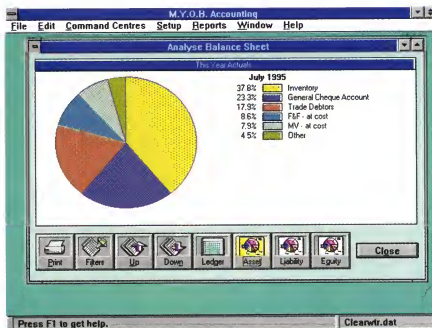
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data verification utilities; good collating print options; the ability to post transactions to the last financial year; and optional integrated inventory. The essential financial statements are in a bulletproof form that the user can't damage. The General Ledger Report Writer is exceptionally user-friendly. There is also an optional Report Writer module that accesses all files, not just the general ledger files.

Windows accountancy software is strikingly more friendly for the first-time user than DOS software. However, Pastel is still showing signs of being a DOS package converted to Windows, rather than being a package specifically developed for Windows. For example, it is not possible to have two windows open on the screen at the same time, nor is it possible to drag and drop across windows. Unfortunately, the Windows environment has resulted in much slower processing for Pastel 4.0. While Pastel is almost instantaneous when recording transactions, most reports took 30 seconds or more to display on the screen. Updating transaction batches also took quite some time.

The choice of using batches provides good transaction processing speed in Pastel, but has the disadvantage of no running balances for the bank, profitability, etc, unless batches are updated. Also, once a batch has been posted, transactions cannot be edited or deleted. Pastel is also inflexible in that it does not allow you to change a general ledger or stock code once established.

In summary, Pastel offers a tremendous range of features that is

MYOB for Windows 5.0

Price: \$495 without Payroll, \$695 with Payroll
Support: \$140 for 12 months, includes all version upgrades.

Data-Tech Software
Phone: (02) 9955 3611

Point of Sale Module, and the stock reports may not be flexible enough for some manufacturers. MYOB does not have a report writer so you must ensure that the standard reports are sufficient for your needs, or be prepared to fiddle around exporting to spreadsheets.

The other limitation in MYOB is transaction volume. To be specific, one item is created in a Dictionary file for every line of text in invoices, purchase orders, payments, and so on. The maximum number of data items allowed in this file is 32,700 — with a significant number of transactions you might be forced to purge data as often as every 3–6 months, which could mean losing valid transaction detail belonging to the current financial year.

There are some lovely new features in version 5.0, including batch

The Windows interface of MYOB makes it very easy to use

printing, instant pie and bar chart analysis of key financial information, and lots more. If MYOB's existing features meet your needs and you want a single-user system, and if you are not going to be limited by volume constraints, it is an excellent package and a bargain for the price.

Pastel Partner for Windows 4.0

Pastel Partner is an integrated general accounting package for Windows. Optional add-ons are Multi-currency, Bill of Materials, Point of Sale, Report Writer and Multi-user (up to 10 users).

Pastel is very flexible in its manufacturing and pricing features, allowing multiple selling prices, barcodes, quick-mode invoicing and a multi-currency function across all modules. Surprisingly though, there is no back-order facility. It can export to Cee Data and Solution 6, and does electronic bank reconciliations. Setup is designed to be straightforward, helped by the sample sets of accounts and the graphical interface.

Pastel has backup, restore and

Pastel Partner for Windows 4.0

Price: \$495 for core module, \$200 per additional module (\$270 Crystal Report-Writer); \$200 multi-user (up to 10 users). There is no Payroll Module.
Support: \$175 single user, \$350 multi-user. Includes support, free updates, and newsletters.

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quite surprising for this price range. Although it will be slow to generate reports even with 8Mb of RAM, there is no limit on the volume of transactions, and individual transaction processing is reasonably fast.

Equity 2.8

Equity is a DOS-based general accounting package, available in both single- and multi-user versions.

The surprising thing about Equity is its power and tremendous range of features, which one would normally associate with more expensive software. For example, when you look up a customer you can readily view aged balances, monthly sales totals for the last 12 months, detailed transaction history (including the products sold) for up to 99 months, average monthly sales, sales area and category, salesperson, sales tax options, and much more. The stock screen includes sales history for each stock item, Bill of Materials for man-

ufacturers, individual general ledger code links, minimum stock levels, reorder levels, lead-times and, again, much more. The standard reports are comprehensive throughout, from sales analysis to sales commission reports, and from budget reports to individual price lists per customer.

Equity is both fast and truly multi-user. For example, it allows one user to view the details of a customer while another user is invoicing the same customer, and multiple users can invoice at the same time. There is no limit to the number of users. Suppliers, customers or stock items can be added on the fly from wherever you are in the program, and searches can be made for words within a description.

Equity uses a combination of batch and live processing. However, once any transaction is posted in Equity the user is unable to edit it and must reverse or journal out this transaction. Although Equity has the ability to export, its in-built Report Writer

is limited to the General Ledger only, and is fairly restrictive with its options. An additional Report Writer module is also available, but the average user will need help to learn how to use this. Equity does not have the features of foreign currency accounting, or of multiple company consolidation.

Equity is a versatile option for manufacturers, wholesalers and retailers, who up until now have often been forced into a much higher price bracket. It has many innovative features not found among its competitors, and is user-friendly and informative.

Attaché 5.0

Attaché 5.0 is a DOS-based application targeted at medium-sized businesses. It is sold in a modular format, meaning that you purchase general ledger, customers, suppliers and so on, separately. In total, there are 10 main modules, five sub-modules and 15 half sub-modules available.

Attaché is comprehensive and its strength lies in flexibility. For example, general ledger codes can be linked separately to each customer, stock item or supplier, and then overridden at any point. The batch structure allows for company consolidation, editing of general ledger transactions, and facilitates custom reporting (if you have the Report Writer module). Attaché is both single- and multi-user, and can cope with high transaction volume and very large data files.

Attaché has a comprehensive Report Writer. Data can be exported to it, manipulated and then imported back. This often avoids expensive modifications. However, it's not a breeze to use, so the majority of users rely on their Attaché Sales Consultant to set up reports for them. The Attaché Sales Consultants can be both a strength and a weakness of the product. If you get a good Sales Consultant then it is a strength, and vice versa!

Attaché could scarcely be described as an intuitive product, exacerbated by the absence of help in most of the modules. Key documents such as invoices cannot be printed to

F1 [Main]				Equity 2.8				(Alt) [F2] Search			
Stock Record				Press Enter to continue							
Stock code		WALLET		Sup prod code		W-BRN					
Description		WALLET - Leather Brown									
Supplier code		BLL		ALLROUND BUSINESS EQUIPMENT							
Product group		LEATHER									
Sales unit		Ea		Location		BIN3		1 Stock on hand		2,005.00	
Stock type		Stock		Category		SIN		Allocated		2,005.00	
Sales tax		21.00%		Taxable		21.00000%		On B/Order		2.00	
Cost Ave		5.4000		New		5.6500		Lead time		1,500.00	
M/U Code		2						Req'd monthly		3,000.00	
		20%						Minimum stock			
Cat		Price		QtyBk				Month to date		Year to date	
1 Accounts		6.50		10				1,220.00		2,506.00	
2 CDD		6.00		0		Qty sold		5,448.00		13,457.00	
3		0.00		0		Cost		8,113.00		16,664.00	
4		0.00		0		Sales		6,761.00		13,773.00	
5		0.00		0		Taxable sales		1,352.00		2,891.00	
6		0.00		0		Sales tax					
F2 Search F3 Assembly F4 Hist F5 Sales F7 Notes F8 More F9 P/Matrix Esc Exit											
26/01/95 Sample Company 10:23AM											

Equity is a fast package that packs a lot of information onto each screen

Equity 2.8

Price: \$1,500 single user, \$2,500 multi-user (unlimited users). Add-ons: POS, \$500 per register; Report Writer, \$500; Order-Entry, \$500. Support: Free for first three months, then \$40 pay-per-call option.

Microshare Systems
Phone: (047) 57 3010

screen, and there is no archiving facility for old invoices. While batches may provide flexibility, there is no option to automate batch processing. Each transaction must belong to a batch of like items with the correct period number. Then the user must post this batch, delete it as a work file, post the resultant combined batch to all the other modules and delete the work file again. Reports must be printed at the period-end, or monthly histories will be lost. Unless all batches are up-to-date, there is no running bank balance, running debtors' balance or running profitability figure.

Some key features one would expect in a package of this price range are missing. There are no in-built Backup & Restore functions; no customer or stock histories month by month; no ability to change general ledger codes, customer codes or stock codes; no facility to scroll up in transactions on customer screens; no multi-currency options, except Purchases;

no easy job-costing system for tradespeople; and no commission reports, except with Report Writer.

For an inexperienced user it is possible to roll-over a period twice, duplicate a cheque number, link a non-stock item to a stock expense code, send average stock cost haywire due to negative stock quantities, and throw the Profit & Loss out of balance. With untrained users Attaché can become an operational nightmare.

The cost of Attaché soon mounts because of its modular pricing structure. For example, the General Ledger and Cashbook modules do not include Bank Reconciliation, which is an extra sub-module. The Invoicing module does not allow for true forward invoicing; this requires the Order Entry module.

Attaché 5 provides flexible and detailed reporting essential for many medium-sized businesses. However, it has a higher price tag, and needs ongoing consultant support for it to operate smoothly. ■

Attaché5 - Attaché Software Sample Data 515230 27/07/95
Customer Maintenance

Modify Mode PEPPER The Peppercorn Hill 5 Remington Hall ROCKHAMPTON QLD 4700 <079> 273 3948	Steve Van Dyke ROCKHAMPTON Balance Forward 3 Charge AP	GLD 2 RT No 3.00 1 1 2 Yes No 25000.00
---	---	--

F1 Accept F2 F3 Cancel F4 Notes F5 F6 F7 F8 F9 F10 F11 Exit

Attaché 5.0

Price: \$850 per module; \$300 per sub-module; \$150 per half sub-module; \$495 per multi-user login. Support: Training and support is handled only by individual Attaché consultants; \$180-\$495 per year Customer Plan provides upgrades and newsletters.

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Phone: (02) 9929 8700

Attaché is not entirely intuitive and requires ongoing consultant support

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Changing the WAY things WORK

The inner workings of the Windows 95 taskbar, Start menu and shortcuts, and how to customise them

By Jan Wikström

Many find it a little hard to accept the Windows 95 interface and operate it as intended — mainly because most of us (well, all right, I, anyway) resent having such a sweeping change imposed without obvious advantages. Indeed, we have lost some familiar and pleasant features, such as the ability to freeze the desktop, Program Manager and File Manager setup details.

However, while the arrangement of icons and the like are strictly "save on exit" and therefore come back wherever you left them, there are some things you can pin down.

Set in concrete

The Start menu is one such thing. It stays the way you set it up both as regards style (large or small icons) and organisation.

It's easy to set up, too — once you have grasped the basic fact that the Start

menu is nothing but a set of special-function folders.

I don't think I'm at all untypical in at first shying away from using the Start menu. After all, Microsoft has conditioned us to using grouped icons for years. However, the Start menu has one big advantage over what passes for Program Manager groups in Windows 95: when you use it to start an application, the menu zips back into its hole the moment you let go. The group or chain of groups, on the other hand, have to be tucked away tediously by hand.

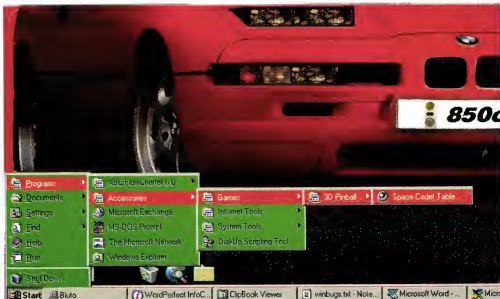
So the Start menu looks the best option for quick, minimum-effort program launching. There's only one hitch: in line with the general style of Microsoft products, the default arrangement is a dog's breakfast.

Fortunately, it's easy to improve the menu.

There are two separate issues here: where are the actual files installed and where do the icons go? The default location for program files is, believe it or not, `C:\Program Files\{foldername}` and for the "icons", a "group" is created under `C:\Windows\Start menu\Programs\{foldername}`. This is Microsoft's idea of an organised system, based on file type rather than program function. The group and icons appear as menu choices, and they always appear under the main option Programs. This means that when you go to run your newly installed program, you go, for example, *Start-Programs-Micrografx-Picture Publisher 6*.

If your system has only half a dozen application programs on it, you can live with this sort of arrangement, although it would be less cumbersome to go *Start-Picture Publisher 6*.

And if you have a large system with 50 or 60 applications, you waste a lot of time searching if you don't have it organised by function — by which I mean putting all word processing programs and utilities under *Start-Writing*, all desktop applets under *Start-Desk* and so on.



This is what Microsoft thinks is a good menu arrangement. Note the five levels of selection and the lack of functional logic

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I hope you agree that this is a more sensible way of organising the Start menu. Note the two levels of selection and the arrangement of main options according to function. Folders (menu choices) that you add yourself at the "main" level automatically go to the upper menu pane.

The downside of this method is that if you have a small monitor running standard VGA and want to use the Large Icons option, there isn't room for a lot of additional menu choices

Function, not form

If you want an organisation based on program function, you have to make sure that you specify the program storage folder in the installation program — as in my recent installation of the 32-bit ABC Flowchart beta, which I put into `D:\Graphics\ABC beta`. As for the "icon" location, most installation programs don't give you a choice, but that's not insuperable — you can simply use the Explorer to drag the Start menu option to the place in the menu where you want it.

However, if the program storage folder is wrong, you're stuck with it. The reason is that not only are program location details cryptically enshrined in the Registry (and possibly `SYS.INI` and `WIN.INI`) and the program's own `INI` file, but there may also be additional, hidden restrictions on program location. I have come across two idiot programs that would only run from the C drive.

Falling off a log

There are several ways to commit surgery on the Start menu. The official way is via `Start-Settings-Taskbar`, which raises a dual dialogue box. You can open the same dialogue box by right-clicking the taskbar (not the Start button) and clicking *Properties* in the popup menu.

The *Taskbar Options* tab in this box lets you regulate appearance details of the bar and menu and the *Start Menu Program* tab lets you add, delete and arrange menu options.

Well, some of them, anyway — certain feature options in the first section are permanent and can't be changed, but you can operate on application control options to your heart's content.

Two buttons control wizards for adding and removing individual options and a button marked *Advanced...* gets you an Explorer view of the folders that make up the menu. As usual for Microsoft wizards, these couldn't be easier to use: all you need to know is that you want to add or delete a control option (equivalent to a Win 3.x icon), the rest is all done by browsing.

The Explorer view acts like any other Explorer window, only it's restricted to the Start menu folders. It also doesn't show those menu options you can't change, such as `Shut Down`, `Help`, `Find` and `Settings`. Here, you can use the normal controls including drag-and-drop to create, change and move folders, which later show up as changes to the menu. There is only one thing you can't do to the menu: change the order of options at a given level.

Because the menu really is a

folder in List view, it automatically sorts the items in alphabetical order. I can't wait for a third-party product to let me arrange the menu options in the order of most frequent use, from the bottom up.

Looking under the log

There are other ways of getting an Explorer view of the Start menu. There's the hard way, which is simply tracing down the Explorer tree `Desktop-C->Windows-Start Menu`. There are also two cute short cuts: right-click on the *Start* button and choose *Open* or *Explore* from the pop-up menu. Either way, you need to take care and think about what you're doing: your access is no longer restricted to just the Start menu folders. This means that you could now copy and move actual program files into and out of the Start menu instead of making harmless "shortcuts" (the Windows 95 equivalent of Program Manager icons).

That's not a problem in itself; program files work just as well as shortcuts in the menu. The problem comes later when you edit the menu and might delete a program instead of just its shortcut. Yes, I know the shortcut icons always have a little crooked arrow in the left bottom corner, and so do you, but what about when someone else wants to edit the menu? ➤

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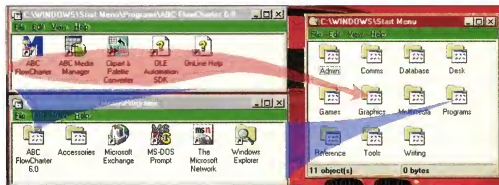
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Most installation programs open a "group window" with icons and leave it behind when they go away. This, unintentionally, offers a neat short cut to reorganizing the Start menu without even opening it. Top left is the "group" left behind by Micrografix' installer for the 32-bit beta of ABC Flowchart. When you press <Backspace>, the mother window of the "group" opens up (bottom left). Do it again and the next mother window opens (right). As you can see from the path name at the top of the last window, that's the main level of the Start menu. At this stage, just grab the contents of the "group" (pink arrow) and drop them on the Graphics folder where they functionally belong. This leaves the "group" empty, so you select the folder icon (bottom left) and press <Delete>. All done!

Willy nilly, but . . .

Another important point about the menu is that it's the only direct way to access some Windows 95 features: *Help*, *Run*, *Find*, *Settings* and *Documents*. No doubt you noticed that I carefully said "direct" there; there are more or less roundabout ways to get at all of these things except *Run*. *Help* and *Find* are available on the Explorer menu bar, *Settings* are available in (yech) **My Computer** and *Documents* is just another folder.

However, the Start menu is where they're all available directly

and easily, so I'm sure you, like me, will find yourself using the menu for those functions if nothing else.

And is there a future for those of us who are pig-headed about icons and don't want to use the Start menu except when they absolutely have to? You bet, and there's nothing to it as long as you remember to do the same as the Start menu and keep two sets of folders: one for actual programs and one for "shortcuts" — that is, icons that behave like the icons we're used to from Windows 3.x. For the program folders, we do the same as I

described with the menu alternative, but the icon folders are a different story.

Normally, we would create a set of folders on the desktop and drop shortcuts into those — but there's one dumb thing about folders that make us add one more level of complication: you can't change the icon of a folder. And if there's one thing we iconists don't want, it's a boring desktop with a row of identical folder icons.

Easier than a tax return

The good news is that you *can* change the icon of a "shortcut", so my workaround for boring folders is to create a set of dummy folders within a folder inside the Windows folder called "groups", off the desktop. I then create "shortcuts" to those folders on the desktop merely by right-clicking and dragging on to the desktop. As you let go, a menu pops up and you select "create shortcut here".

Once the shortcut is in place, you right-click on it and select *Properties* from the pop-up menu; this opens a ▶



Simulated Program Manager groups being created. The Tools "group" is open (green arrow) and the "group" has just been right-dragged to the desktop and the pop-up menu is ready to select the "Shortcut" option (blue arrow). The "group" at the top is My Computer, renamed Bluta for the pinheaded musclemoon in Popeye

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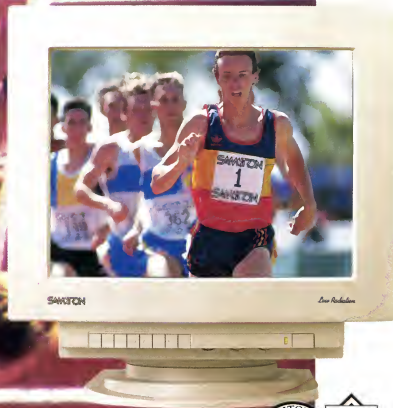
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dialogue box that lets you change the name and icon. Now, to make use of this, there's just one more step: open Explorer on the folder where the actual program lives and drag the main program file to the group "shortcut" on the desktop.

The Microsoft programmers have been really nifty here: this automatically creates a "shortcut" to the program, located in the actual group folder but also visible in the shortcut folder on the desktop.

So now you have something that behaves exactly like a Program Manager group, only it's located straight on the desktop.

Of course, you'll create direct "shortcuts" on the desktop for the programs you use all the time, such as Explorer, Calculator and Notepad. That's a straight-forward right-drag operation.

One last point about icons — groups or programs — on the desktop: you can't use *Arrange Icons* or even *Line Up Icons* to get any sort of sensible arrangement. The bad news is that you'll have to drag the icons into place by hand; the good news is that they'll stay where you put them. Until you have a Major Incident involving the display, that is.

Say what?

Changing the subject ever so slightly, I'd now like to tell you about a recent addition to Windows 95 — a package called PLUS! that comes on a CD of its own. Even before we look at the contents, this disk gives us a foretaste of pleasures to come: just shove it in, and it automatically starts a program.

This particular program gives you three options: install the Plus features, view Microsoft's Multimedia catalogue and browse the CD with Explorer. So nice, so easy. I particularly like being able to take in the multimedia catalogue without (as under 3.x) wasting hard disk space on it.



This is the horribly odditive pinball game that comes with the Plus! CD.

An earlier beta had the same basic game with other decorations and different rules; expect a series of such variants of the same basic game. I found the game to play like a true real-time simulation: not only is the ball movement totally realistic, it even had occasionally malfunctioning bumpers and sticking flippers, just like a real one

Now for the contents: a nice mix of practical utilities and fun stuff. The practical items start with an upgrade to DriveSpace (v3), System Agent (a scheduled program launcher), the Internet Jumpstart Kit (utilities and a setup wizard to help get you started with Internet), and a Dial-up Networking Server (to let you dial in and control your computer from another one). Without studying these products in depth (they are beta items, after all) I found them useful and effective.

The fun stuff starts off with an outstanding classical-style pinball game, which leads to the interesting observation that Microsoft has always managed a nice balance between its personal productivity programs and a bunch of outright timewasters . . . Next is an extension of the display

scheme (which is where you set the colours of shared Windows features): the Desktop Theme. The set of desktop themes included on this CD comprise colours, special icons, a screen saver, sets of mouse pointers and a special screen display font.

Microsoft has done a pretty good job of composing 12 desktop themes (the Leonardo da Vinci theme is my favourite) but also points the way for end-users to compose individual themes. I do like the way these themes can give the Windows 95 environment a very personal "feel".

Finally, there's a set of "visual enhancements": font smoothing (basically TrueType anti-aliasing), a selection of animated mouse pointers, an excellent high-legibility system font and a few minor trimmings. ■

Optimising WINDOWS 95's performance

By Scott Dunn and Scott Spanbauer

Windows 3.x was great for computer columnists. It inspired a seemingly endless stream of questions from readers. Number one on the Q&A hit parade: How do I improve performance? That's why Windows 95 is good news for users and bad news for writers. It requires only minimal tweaking to work optimally with most systems. But there are still ways you can finetune Windows 95's speed.

Driver substitutes

Both Windows 3.x and Windows 95 use special pieces of software known as device drivers to communicate with the various hardware components in your computer. Windows 95 uses 32-bit protected-mode device drivers, which outperform their real-mode counterparts from Windows 3.x and DOS.

Windows 95 comes with its own collection of protected-mode drivers for the most common system components, including graphics cards, CD-ROM and hard drives, and network hardware. So when you install the new OS, its Setup Wizard replaces any real-mode drivers it finds with its own 32-bit protected-mode versions — provided it can find compatible substitutes.

For example, if you were using DOS 6.22's DriveSpace utility to compress your hard disk, Win 95 will overwrite the real-mode driver `drvspace.vxd` with its 32-bit `drvspace.vxd` (which takes approximately 10 per cent more memory, but the speed trade-off is worth it).

If Setup can't find a substitute, it continues to use your old driver; this can happen, for example, if you're using an older version of Stackler. If Windows detects such a DOS-mode device driver, it gives you a "Performance Warning" message when you start your computer. The message supplies the name of the program, explains that it may decrease performance, and asks if you want more

information. If you click Yes, Windows displays the name of the driver. You can click Details to see the line in `autoexec.bat` that loads it. Windows advises you to disable the program or to contact the manufacturer for a newer version of the driver. Upgrade these older drivers as soon as possible with ones that can run in protected mode.

Automatic swap files

Windows uses hard disk space to simulate RAM when the genuine article runs low. Under Windows 3.x, the best

has multiple disk drives, you can improve Windows 95's virtual memory performance by putting the virtual memory swap file on your fastest drive on your PC. But if that drive is nearly full or in constant use, put the swap file on a less frequently used drive with reasonable performance and plenty of free space.

You can tell Windows 95 to put your swap file on a compressed drive (provided that it uses a protected-mode driver such as `drvspace.vxd`), but you will probably get better performance if you assign the swap file to a drive that's uncompressed.

Once you decide which drive to use, right-click My Computer and choose Properties. Click the Performance tab, then click the Virtual Memory button. Select Let me specify my own virtual memory settings and specify the hard drive to use for your swap file in the Hard disk list.

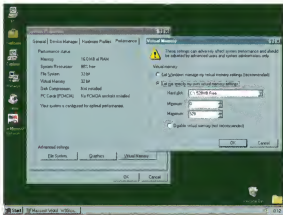
Windows will supply minimum and maximum swap file sizes (0Mb as the minimum and however much disk space you have free as a maximum), and there's no need to argue.

Correct cache

Swap files extend your PC's memory, but the slowest system in most computers is the hard drive. Previous versions of DOS and Windows came with SmartDrive, a disk caching program that lets you minimise disk access by keeping the most recent information from your disk in RAM.

When you install Windows 95, it disables SmartDrive and any other caching software it recognises in your `autoexec.bat` or `config.sys` files and uses its own cache. You don't have to worry about setting a suitable size for your hard drive cache, because Windows 95 dynamically changes the size according to the free memory you have.

But you do have to be sure Windows' cache is correct for your particu- ➤



You can let Windows 95 determine virtual memory requirements on the fly, or you can specify where you would like a swap file to be set up

way to get this virtual memory was to set aside a portion of disk space as a permanent swap file. If you chose not to have a permanent swap file, Windows would automatically create temporary swap files on the fly, but it was a major drag on performance.

Windows 95 attempts to combine the best aspects of temporary and permanent swap files by altering the swap file size dynamically as circumstances require. This means you don't have to sacrifice huge amounts of disk space for a swap file that may be used only occasionally. It also means you don't have to specify the swap file's size yourself.

You can, however, specify where the swap file will go. If your computer

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lar PC. Right-click My Computer and choose Properties. Click the Performance tab, then click File System. Make sure the "Typical role of this machine" list shows the primary use of your system: Desktop computer, Mobile or docking system, or Network server.

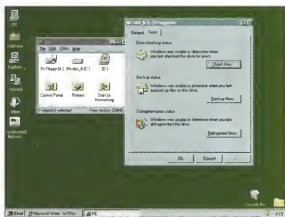
If your computer has sufficient muscle (20Mb of RAM or more) and you routinely put it through a workout like a network file server (if, for example, you frequently access a number of different folders), try specifying Network server for "Typical role of this machine".

Windows 95 provides a separate cache for a CD-ROM drive. In the CD-ROM portion of the Properties-Performance-File System dialogue box, make sure the designated speed type is correct in the "Optimise Access Pattern for" box. Most users can safely stick with the default cache size, but if you're not satisfied you can experiment with changing the Supplemental cache size. If you do try adjusting the CD-ROM cache size, keep the alteration modest: unless you make the cache truly huge — large enough to hold entire video clips, for example — it won't help multimedia performance much.

Defragment that drive

There are some optimisation tips that never change. As with DOS, Windows 3.x and now Windows 95, your disk access time will be a wee bit faster if you use a defragging program. By consolidating free space and reassembling files that over time get scattered all over your hard drive, these utilities make it easier for your system to find whatever it might be looking for.

The Disk Defragmenter that comes with Windows 95 is rudimentary at best; it can't relocate system files to the beginning of your disk for faster access, for example, and although it works fine with drives compressed with DriveSpace and DoubleSpace (the disk compression utilities that shipped with MS-DOS 6.0 and higher), it can't defragment drives that use other compression



Performance can be improved by defragmenting your hard disk. Just click Defragment Now...



By manipulating the Spool Settings you can determine whether print speed or application control is given priority

software like Stacker. But within these limitations, it will get the job done.

To start the defragger, you can choose Start-Programs-Accories-System Tools-Disk Defragmenter; or simply locate the drive you want to defragment using My Computer or Explorer and right-click the drive icon. Choose Properties, click the Tools tab, click Defragment now, and then choose OK. The Disk Defragmenter will tell you how badly your disk is fragmented and then let you decide whether to defrag it.

Scan deep

To keep your files and folders in reliable condition, you will need to subject them to a regular diagnostic regimen. Fortunately, that's easy to do with the

Windows 95 version of ScanDisk. This handy utility works with both compressed and uncompressed drives. (It will analyse compression, however, only if you used DoubleSpace or DriveSpace.)

Like its DOS-based predecessor, ScanDisk gives you a choice of activities: you can either perform a standard scan to find errors on files and folders or opt for a thorough scan (which will take somewhat longer) to check the disk for physical defects as well. To start ScanDisk, choose Start-Programs-Accories-System Tools-ScanDisk and follow the instructions from there; or use My Computer or Explorer to locate the drive you want to check, right-click the drive icon, choose Properties, click the Tools tab, and click Check Now. Click Start to scan the disk using the default settings.

The only difficulty with ScanDisk is remembering to use it. Fortunately, you can make ScanDisk automatically check your disk every time you start your PC, then disappear without a bother: right-click the Start button and choose Explore.

Locate the ScanDisk shortcut in the System Tools folder and copy it to your Startup folder (which, in turn, is located in the Programs folder). Then select the shortcut and press <Alt>+<Enter>, or right-click it and choose

Properties. Click the Shortcut tab, and edit the Target line to read `c:\windows\scandisk.exe /a /n` (your path may differ).

The /a switch tells ScanDisk to check all local hard drives (change it to /c, for example, to check only the c: drive). The /n switch makes ScanDisk exit automatically when finished unless your preferences call for it to first post information on screen. If you want ScanDisk to check things out but make no repairs, add the /p switch. The next time you start Windows 95, ScanDisk will do its thing according to your pre-arranged settings. If you set the advanced options to convert lost file fragments to files, you should check your root directory periodically for files with the .chk extension and open them

in WordPad to see if there are any fragments worth saving.

Spool settings

Last but never least is printing. Windows 95 has made great strides in speeding up print jobs. It does so in part by spooling your print data twice, once in a special enhanced metafile format, and then in the language your particular printer understands. Believe it or not, this lets you return to your application quicker. But if you need your hard copy right away, returning to your application immediately may be the last thing you want. If disk space is at a premium, you can always disable spooling altogether.

To give Windows a piece of your mind on the subject, choose Start-Settings-Printers (or double-click the My Computer icon and open the Printers folder). Right-click the icon for your printer and choose Properties. Click the Details tab, then the Spool Settings button. You now have three choices:

Choice number one: To give control back to your application as quickly as possible, select *Spool print jobs so the program finishes printing faster and Start printing after last page is spooled*. This takes more disk space and won't start sending any other print jobs to the printer until the first spooling is completely finished.

Choice number two: To get hard copy faster and save disk space, select *Spool print jobs so program finishes printing faster and Start printing after first page is spooled*. This option requires less disk space because Windows doesn't wait for the first spool file to finish before starting the second. The downside is that you must wait longer before working in your application again.

Choice number three: To get print jobs out as fast as possible and use no disk space, select *Print directly to the printer*. You won't be able to change your mind and pause the print job as you can with spool jobs, and your application may be busy for quite a while. This option is not available for shared printers. When you've made your choice, click OK. ■

Microsoft Plus brings fun, functionality

If you're planning to move to Windows 95, then you'll be interested in this collection of selected utilities from Microsoft. Microsoft Plus has a number of valuable tools, some with good business value and others with good entertainment value.

My favourite tool in this collection is System Agent, which can schedule programs to run at routine intervals. System Agent can save you time and takes some of the headaches out of system maintenance. It's a welcome addition to any PC. By default, the product is installed with four pre-scheduled jobs — a low disk space notification, Disk Defragmenter, and two different ScanDisk jobs. I was able to easily change the properties for these jobs, such as how often to run them, what time to run, or how to respond if the scheduled job does not run. Just as easily, I scheduled new jobs, choosing virtually any executable.

One compelling feature of System Agent is its capability to run jobs after a specified time of system inactivity, as well as the capability to suspend the remainder of the job if you return to use your system.

Microsoft Plus also includes a good World Wide Web browser called Internet Explorer. I set up the browser over both LAN-based TCP/IP and Point to Point Protocol dial-up connections. If you're planning to use this product for dial-up access to the Internet, you can connect through either the Microsoft Network or a third-party provider of your choosing. However, there are no automated sign-up programs for non-Microsoft providers.

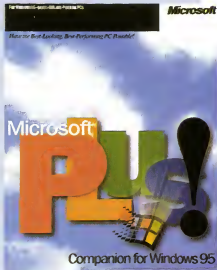
If you use dial-up networking, Plus offers a dial-in server to complement the dial-out networking capabilities included in Windows 95. Although Windows 95 is scheduled to ship with a disk compression utility, Drive Space 3 an Plus boasts even better compression and performance, according to Microsoft.

On the fun side, Desktop Themes, which installs as a control panel component, can help transform the look of your desktop. It adds wallpapers, screen savers, sounds, icons and animated mouse cursors to your arsenal of Windows 95 customising tools. The program organises these items into specific themes, such as travel, mystery, science, the 1960s and more. Using one of these canned schemes gives your machine a consistent set of wallpaper, system sounds, icons, cursors and colour/tant combinations. You can also create and save themes of your own.

A handful of generic tools in this collection add to some of Windows 95's features, such as a tool that lets you stretch desktop wallpapers to fit the screen for higher resolutions. Another feature enhances the task bar (used to launch applications) by smoothing its appearance and disappearance when using the task bar's hide feature. Finally, for the fun-seekers, Microsoft included a game in the pack, 3-D Pinball.

Microsoft Plus will certainly add value to systems running Windows 95, and at \$69 it's a good buy. I just wish these utilities were bundled with Windows 95 rather than in an add-on pack.

— Jeff Symoens



TIPS for a trouble-free upgrade

By Sharon Crawford and Charlie Russel

The good news is, Windows 95 comes with a Setup Wizard utility to ease the pain of installation. The bad news is, this Wizard's magic doesn't always work as advertised. While many users will find they can just feed the floppies (or, better, the CD-ROM) into their PC and have a perfectly fine installation, others may stumble into a number of potential pitfalls along the way. Here are a few simple steps you can take before, during, and after installation to make sure Windows 95 co-operates with your PC.

Before

Make room. Windows 95 needs plenty of hard drive space. And, at least with pre-release versions, Microsoft's official disk requirements don't always match with reality. For example, we had 30Mb free before starting a "compact" installation over Windows 3.1 that Microsoft said required 24Mb. Setup Wizard still stopped the procedure for a lack of disk space. Perhaps Microsoft will have solved the problem by the time the software reaches its final form.

But you still shouldn't start an installation with less than 50Mb free — you can bet that any 32-bit applications you decide to throw at your system will be incredible space hogs.

How to liberate those megabytes? For starters, get rid of old, unused applications — those you haven't used for a year or more are good candidates. With DOS apps, you can simply delete their directories and everything in them. Windows programs are a little stickier — you'll have to use a cleanup program like Uninstaller or Remove-IT to eliminate the applications and all the errant .dlls, .inis, and other files they've scattered all over your hard drive. You should also take this opportunity to archive data files you don't need any more.

Next (you knew this one was coming), do a backup. A complete copy of your entire disk is pretty impractical unless you have a tape drive. If you have to pick and choose, start with your data. Then, if you have the patience and room on your floppies, look through your applications' directories for any files created since you installed the apps — they may contain crucial configuration information — and back them up. Finally, create a rescue disk (see "Rescue me").

Now get rid of extraneous programs that load automatically. This means deactivating anything in autoexec.bat and config.sys that isn't necessary for booting your system (such as memory managers, undelete TSRs, and antivirus utilities). You should also disable the "load=" and "run=" lines in your current win.ini file by loading it in a text editor and then placing a semicolon in front of these lines (for example, ;load=c:\msoffice\msoffice.exe). Finally, remove everything from your Windows 3.x StartUp group. Now you can re-boot your system, restart Windows, and close any apps that launched at startup.

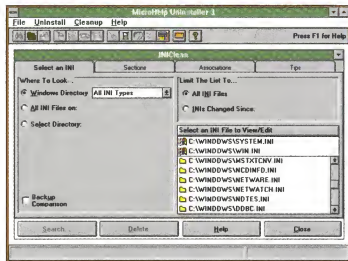
During

You're ready to take the plunge. Insert Windows 95's Setup Disk 1 (or the CD-ROM) in the appropriate drive, select that drive in File Manager, and double-click setup.exe. The Setup Wizard will now take over.

The Wizard consists of a series of dialogue boxes that lead you, step by step, through the setup procedure. You can retreat or even cancel the install at almost any time. But if you cancel the install after the Setup Wizard has started copying files (and you're installing over your old version), Windows may not run correctly. While the Wizard doesn't ask much of you in the way of brain work, there are a couple of points in the process that do require some forethought.

The first of these is when the Wizard asks you to specify the directory into which you want Windows 95 loaded.

By default, the Setup Wizard will choose the directory containing your old version of Windows. Accepting this default means copying over your old Windows, which means fully committing to the new OS before you've had a chance to use it.



Use Uninstaller or a similar program to clean up your hard disk. Remove unwanted applications and Windows ini files

Installing Windows 95 into a separate directory means you'll be able to use it or your old copy of Windows (by pressing <F8> when your system boots).

While installing to a second directory may seem like the safer choice, it will in fact create difficulties. First of all, you'll have to reinstall your Windows programs if you want them to work properly under Win95. Second, should the installation fail, you'll have to uninstall Windows 95 manually, searching out and deleting its files scattered all over your hard drive (not just in the Win95 directory). Our recommendation: unless you have a specific need to keep Windows 3.x (such as running Windows sessions from OS/2), bite the bullet and install over it.

But play it safe: after you've chosen to install Windows 95 over your previous version of Windows, the Wizard will ask if you want to save system files. Just say yes. The Setup Wizard will then save about 6Mb worth of important Windows 3.x and DOS system files, making it easier to uninstall Windows 95 in case you should ever have second thoughts.

Your next momentous decision: what type of installation do you want — Typical, Portable, Compact, or Custom? The names are pretty self-explanatory. See "What's In, What's Out" for details on the differences. One note: the Custom option isn't the only way to specify what the Setup Wizard puts on your hard drive. Whether you decide on the Typical, Portable, or Compact installation scheme, you will still be able to pick and choose which applications and utilities go into your system later in the process.

Once you've chosen a type of installation, the hard part is over. The Setup Wizard will search your system for hardware. Then it will let you install some of its built-in communications tools — The Microsoft Network, Microsoft Mail and Microsoft Fax. (One note about the Network: you won't have to pay for the service until you're logged on and decide you like it.) If you chose a Typical, Portable, or Compact instal-



After installing Windows 95 you can easily choose which applications and utilities you want on your system

lation, this is the time the Wizard will let you select components. Next, it will ask you to configure your network (be sure to have your network log-in name and password handy). Unless you have some definite opinions about network protocols and adapters, you can just accept the defaults. Then you'll be presented with a bunch of hardware and interface settings (for your keyboard, monitor, power management, regional settings and so on). For safety's sake, leave them alone for now and make your adjustments after Windows 95 has been fully installed. When you're asked if you want to create a Startup disk, do it.

After all this prep work, the Setup Wizard will finally go ahead and copy the program files to your hard drive. When it's done, it will restart your computer. If at this stage your PC just sits there with a blank look on its face doing nothing, wait 30 seconds before hitting the machine's reset button. This reset won't harm your installation and is not a sign of installation failure. Your computer will re-boot afterwards, and go straight to the next stage.

After

After you've successfully restarted, Windows 95 still has a couple of tasks left. First, it will set up your new Control Panel, the Start menu, and Help. If you chose to install the Microsoft Network or Fax or Mail

communications options, it will also set up something called Exchange, a central organiser for all your mail and fax messaging. (Don't be afraid, Exchange comes with a Setup Wizard of its own.) And that's pretty much it. But now that you've got the new operating system installed, what do you do next? Read on.

Rescue me

Just in case something goes wrong with Windows 95, you'll want to have a few crucial system files on a bootable floppy. Norton Utilities and PC Tools can create such disks automatically, but you can also make one by copying the following files onto a disk:

```
autoexec.bat
config.sys
io.sys and msdos.sys
command.com
scandisk.exe or chkdsk.exe
mem.exe (to check memory usage)
msd.exe (to diagnose system problems)
fdisk.exe, format.exe, and sys.com
(for the worst-case scenario, where you have to repartition and reformat your drive)
attrib.exe
edit.exe or any other text editor
any drivers loaded in either config.sys or autoexec.bat
```

Before you install Win95, boot your system with this rescue disk to make sure your escape hatch works. ■

How to CUSTOMISE your desktop

By Scott Dunn, Sharon Crawford,
Charlie Russel and Michael Lasky

Just when you had Windows 3.x looking precisely the way you had always wanted, along comes Windows 95, determined to make you start all over again. But if you give the new interface a little time — and apply a little customising — chances are you'll grow to like the new operating system at least as much as the old one. Here's a collection of expert tips designed to help you make Windows 95 feel like home.

Decorate the desktop

To customise the visual aspects of Windows in general and your desktop in particular, right-click the desktop and choose Properties. The resulting tabbed dialogue box gives you access to virtually all the display settings you'll need to change Windows' look.

Settings for patterns and wallpaper (accessed via the Background tab) and screen savers (via the Screen Saver tab) are pretty much the same as in Windows 3.x. But the Appearance tab is where the real action is. From there, you can define on-screen colours, icon spacing, and system fonts by choosing each element from a long drop-down list, called Items. You just pick the item you want to change, then adjust its colour or size.

If you don't want to specify every single screen element yourself, you can select a predefined colour scheme. Unfortunately, the schemes that come with Windows 95 are pretty ugly. For a mere \$69, Microsoft will sell you the Windows 95 Plus Pack add-on, which includes among other goodies, a bunch of far more attractive schemes (see page 97).

Before you start messing around

with the appearance of these on-screen elements, save your current settings, just in case. Next to the Scheme list, click Save As and give the current scheme a name (such as My Default), then click OK.

After selecting a new look for a display element, click the Apply button to test it out. You can then try new looks without exiting the properties sheet.

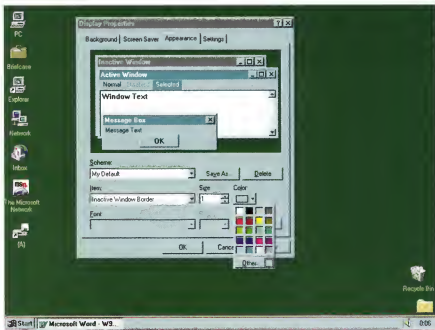
A fourth tab, Settings, lets you change your display resolution on the fly — assuming that your video card is willing. Just move the slider bar to another resolution and click OK. Windows will make the change and display a dialogue box asking you

to confirm the change. If you click No, Windows will restore the original resolution.

Rearrange and rename icons

By now you've found that icons are much more powerful under Windows 95 than they used to be. Once you've added these tools to the desktop, you can tweak their appearance with the right mouse button.

You can rearrange icons any number of ways. The simplest is to click and drag them to new locations. If you want a neater look, drag the icons where you want them, then right-click the desktop and choose Line Up Icons. If you don't like the way they line up, adjust Icon Spacing (on the Properties-Appearance tab's Items list). If you want your icons to



By clicking on the Appearance tab you can choose colours for each item on-screen

Cutting the learning curve

Want a bit (or even a lot) more information about making the upgrade? Here's our guide to the best of what promises to be a flood of Windows 95 books.

Windows 95 For Dummies (Andy Rothbone, IDG Books, 1995). The author of the best-selling *Dummies Guide to Windows 3.1* returns with another exercise in simplicity. Although it's aimed at rank beginners, this guide is packed with enough tips, shortcuts, warnings and technical info to make it worthwhile for intermediate users too.

The Ultimate Windows 95 Book (Joanne Woodcock, Microsoft Press, 1995) is another great beginners book, offering practical tips, troubleshooting how-tos and PowerPlay

tutorials — well-organised hands-on guides that show you how to configure the operating system to your liking. Advanced users and MIS types will want to check out *Windows 95 Resource Kit* (Microsoft Press, 1995). This kit — a book and a set of floppies — covers configuration troubleshooting and is loaded with otherwise undocumented tips and tricks.

If you're looking for shorter, cheaper guides, two are worth noting: *Windows 95 For Dummies Quick Reference* (Greg Horvey, IDG Books, 1995) effectively abstracts the larger Dummies book, with capsule answers to all sorts of questions. If you prefer a glossary-style approach, *Field Guide to Windows 95* (Steve Nelson, Microsoft Press, 1995) is a quick A to Z directory of uncomplicated answers covering the what, where, why and how of Windows 95's features and functions.

— Michael Losky

appear on the desktop in a particular order, select Arrange Icons, then select the sort order you want to use — by name, type, size, or date. If you're truly compulsive, you can select Auto Arrange and let Windows 95 continually arrange your icons for you.

Of the permanent icons on the desktop, all but the Recycle Bin can be renamed. So if you find My Computer a little too cutesy — reminiscent of My Little Pony or My First Barbie — right-click the icon, choose

Rename, and perform a name change on the spot (you could also left-click the icon once, click its label to switch to editing mode, and type in the new label).

Customise your shortcuts

In Windows 95 you can change the appearance of all icons representing files of a particular type, but you can't assign different icons to files of the same type. You can get around this by using shortcuts, to which you can

assign individualised icons. To change all icons for a file type, first open Explorer or My Computer and choose View-Options-File Types.

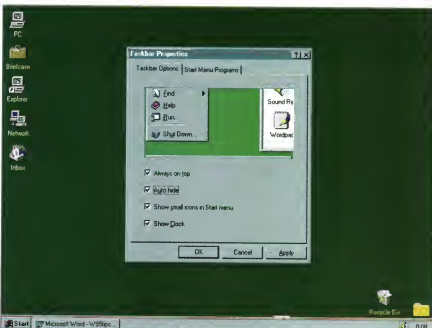
Scroll through the list and select the file type you want to change. Click Edit, then Change Icon. Select an icon from the list or click Browse to look at icons in a different file. Then click OK. To change the icon for an individual shortcut, right-click it, choose Properties, and click the Shortcut tab. Click Change Icon to select another icon as instructed above.

Touch up the Taskbar

The taskbar, located at the bottom of your screen, replaces the seriously under-utilised Task List in Windows 3.x. Every open folder and application has a button on the taskbar. A single mouse click on a taskbar button makes that application active. You can move the taskbar to the top or side of the screen by dragging it there. You can alter its size by right-clicking it (not on a button) and choosing Properties (or Start-Settings-Taskbar).

This dialogue box lets you make the taskbar appear on top of every application, disappear when not in use (just move the mouse pointer to wherever you've positioned it to get it back), display icons small or large, and show or hide the clock.

If you want the taskbar available but not visible when running a program full screen, select Always on top and Auto hide. The taskbar will pop up whenever you rest your cursor over it. ■



The taskbar can be available at all times, but not always visible — just select Always on top and Auto hide. When you place your cursor over the right spot on-screen the taskbar will re-appear

TOP 10 PCs and Notebooks

THIS MONTH FOUR NEW COMBATANTS VIE FOR POSITION IN THIS VERY COMPETITIVE FIELD OF COMPUTERS. THREE OF THEM ARE DESKTOP PCs, ALL BEASTS IN THEIR OWN RIGHT, ESPECIALLY THE AS-PROMISED, HIGHLY CONFIGURED BEYOND SUPERO 133. LAST MONTH WE TESTED IT IN CLARK KENT MODE, WITH 8Mb OF RAM, AN IDE HARD DRIVE AND A 1Mb VIDEO CARD. THIS MONTH THE UNDERWEAR IS ON THE OUTSIDE OF THE CASE AND THE RED CAPE IS FLAPPING — THE SUPERO 133 SCORED A RECORD 456 POINTS IN THE SYSMARK TEST, DOUBLE THE SCORE OF SOME PENTIUM 90s, AND 156 POINTS MORE THAN IT SCORED IN ITS MEEK-AND-MILD GUISE.

This proves beyond a doubt that mixing and matching the right componentry is of utmost importance when it comes to performance. When you consider that performance increased by 50 per cent by changing the graphics card and hard drive and increasing memory to 16Mb, the result is astounding. The rest of the system is identical to last month's configuration.

The other PCs tested are the 100MHz Pentium Compucon P5/100XE and the 90MHz Pentium Compaq Prolinea 590. These are high-end systems, set up with 16Mb of RAM, large hard drives and fast graphics cards. Of particular interest is the graphics card in the Compucon. It is a 4Mb card based on the S3 968 chip, and with the 4Mb of memory is capable of 1,280 by 1,024 resolution at 16.7 million colours at a refresh rate of 70Hz. The overall performance of this system would make any computer artist quite happy.

Compaq supplied two systems this month for testing, one desktop and one notebook. The desktop is the aforementioned Prolinea 590, which would make a robust and reliable LAN station. Considering the size of the hard drive, the amount of memory, and the 2Mb VRAM graphics card, purchasing a system like this would be insurance against the future. It is a bit pricey but nonetheless a good unit.

The notebook from Compaq, the Contura 430cx, is priced very competitively. Based on an Intel DX4-100, the system is configured with 8Mb of RAM (expandable to 32Mb), 720Mb hard drive and a 10.4in active thin-film transistor display. Keyboard feel and travel is excellent, as is the trackball mouse. The NiMH battery gives it a comparatively long life away from power points, which is always a bonus. One of the great features of Compaq notebooks is the fact that they usually come with pre-installed software and the Contura 430cx is no exception; you receive TabWorks, MS-Works, Lotus Organizer, the Symantec game pack and a presentation package called Astound. The only thing lacking from this notebook is multimedia capability, but if you don't require or want it then the Contura 430cx is complete and such good value for money that it debuts in the Top 10 in second position, almost knocking the Dell Latitude XP off its perch.

Shuffling the pack

Top 10 positions have been rearranged again this month, mostly due to price drops and the disappearance of two PCs and one notebook. The Pentium-based Dell Latitude XP175D is no longer available in the same configuration, and will now be shipped with a different hard drive. As soon as we get the current model back from Dell we will retest and possibly see it reappear in the Top Ten. This month's prize for the best leap up the table goes to the Pearl Terminator, which jumped six positions due to a price drop of \$400.

Beyond FAST

If you have a need for speed, we've just tested the fastest PC the Test Centre has ever seen . . .

By Spiro Hionis



The SuperO range of Pentium PCs from Beyond Computers — including the mind-numbingly fast 133MHz Pentium SuperO 133 — is spread over three Top 10 positions

A lot of repricing went on in the PC area, with price drops ranging from \$50 to \$200 compared to last month. Two systems — the DAT Consorte Gold and the Packard Bell Legend — departed from their respective ninth and tenth positions. The Pentium 75 SuperO-T system from Beyond re-entered the Top 10 after dropping in price to \$2,299. Beyond went one step further and dropped the price of the SuperO 100 by \$300, and in doing so managed to usurp the number one position from the Peripherals Plus P5-90.

To sum up, some observations about the machines in the Top Ten. First of all, 486DX2-66 machines have disappeared altogether, both from the PC and notebook areas, with the minimum processor now being the 486DX4-75. Pentiums are obviously very popular,

but the 60MHz and 66MHz varieties also seem to have vanished.

Minimum memory configurations lean towards 8Mb, with 16Mb recommended for smoother performance; as opposed to 12 months ago when 4Mb was the minimum and 8Mb was the recommended amount.

Hard drives have dropped considerably in price in recent months and this is reflected in the machines we have been testing. A reasonable minimum hard drive size for PCs would now be 540Mb, with 850Mb and 1Gb IDE hard drives not that much more expensive. This is opposed to earlier in the year when the jump from 300Mb to 500Mb was a lot less than the jump from 500Mb to 800Mb. A 500Mb hard drive is no longer the exception for notebooks, with some offering even greater storage as an option. ➤

Top 10

PCs AND NOTEBOOKS

Corrections

The prices provided by Dell for its notebooks in the August Top 10 were incorrect. Dell mistakenly supplied prices for lower configurations of the same machines. The correct prices are \$6,290 for the Latitude XP75D, and \$6,995 for the Latitude XP175D. The recalculated Top 10 value ratings are 58 and 48, respectively, and they retain their first and second positions in the Top 10 for the August tests.

We mistakenly stated in the July Top 10 that the configuration of the Syncomp Mediabook notebook had not changed since the December 1994 notebook review. This is not correct: the Mediabook tested for the July issue is a DX4-100 with a 524Mb hard drive and NiMH batteries, whereas the Mediabook reviewed last December was a DX4-75 with a 229Mb hard drive and NiCad batteries.

PCs reviewed this month

Compaq Prolinea 590

This robust-looking 90MHz machine from Compaq is configured with 16Mb of RAM, a 720Mb hard drive and a 2Mb VRAM graphics card, making it ready to handle all workstation tasks. IT managers who wouldn't mind paying the extra dollars would find it an ideal LAN station; add a multimedia kit to turn it into an all-rounder ready for work and play.

The Prolinea 590 ships with a 15in Compaq monitor, and the usual Compaq on-line documentation, tutorials and three-year warranty. The fact that similarly configured machines sell for at least \$1,000 less is a contributing factor to the Prolinea's absence from the Top 10.

Price: \$5,554

Compaq Computer Australia

Phone: (02) 9911 1999

TOP 10

PCs

TOP 10 PCs

		Last month	Months on list	Value rating	Performance rating	Price	CPU	RAM (Mb)	Hard disk (Mb)
1	Beyond SuperO 100	4	2	91	88	\$2,588	Pentium 100	8	540
2	Octek DCA2	2	2	90	49	\$2,095	AMD DX4-100	8	540
3	Peripherals Plus P5-90	1	3	84	63	\$2,800	Pentium 90	8	540
4	Moebius Pentium 90	5	3	83	75	\$2,780	Pentium 90	8	1Gb
5	Peripherals Plus P5-75	3	3	82	53	\$2,750	Pentium 75	8	540
6	Peripherals Plus P5-100	6	2	80	93	\$3,650	Pentium 100	8	1.3Gb
7	Alsa Smart DX4-100	8	2	79	39	\$1,795	Intel DX4-100	8	540
8	Beyond SuperO 133	NEW	NEW	78	152	\$4,399	Pentium 133	16	1Gb
9	Beyond SuperO-T	12	NEW	78	60	\$2,299	Pentium 75	8	850
10	Alsa Smart Pentium 90	7	4	73	90	\$3,350	Pentium 90	16	540

TOP 10

NOTEBOOKS

TOP 10

NOTEBOOKS

		Last month	Months on list	Value rating	Performance rating	Price	CPU	RAM (Mb)	Hard disk (Mb)
1	Dell Latitude XP75D	1	2	58	47	\$6,290	Intel DX4-75	16	810
2	Compaq Canturo 430cx	NEW	NEW	57	41	\$5,995	Intel DX4-100	8	720
3	Pearl Terminator 75	9	5	47	35	\$3,850	Intel DX4-100	8	340
4	FirstLite 410D	3	3	47	35	\$4,285	Intel DX4-100	8	340
5	Dual Pentimedia I	4	3	47	57	\$4,900	Intel Pentium 90	8	540
6	FirstLite 509T	5	3	46	45	\$6,020	Intel Pentium 90	8	340
7	Teco NB5	6	3	46	40	\$4,485	Intel DX4-100	8	540
8	Mitac 4023	7	3	44	39	\$3,750	Intel DX4-100	8	540
9	Toshiba T2150CDT	8	4	43	34	\$8,071	Intel DX4-75	8	520
10	Micra Pro MicraBook 9600	10	3	41	75	\$6,400	Intel Pentium 100	16	340



Compucon P5/100XE

Compucon has mixed and matched its componentry nicely to put together this high performance Pentium 100. The combination of 16Mb, a large hard drive and a monster 4Mb graphics card has served this machine very well in our SYSmark benchmark.

It is a solid-looking desktop, typical of Compucon, features good expandability and ships with a 15in Compucon monitor. Technical support is good, with the usual two-year, return-to-base warranty, BBS and business-hours phone support. Special features include infra-red detection and media bus slots supporting a combination of VGA and sound, or VGA and MPEG and sound, or VGA and SCSI. Unfortunately, this PC is priced out of the Top 10.

Price: \$4,640

Compucon

Phone: (02) 417 7166

Value and Performance

The Top 10 PCs and notebooks are ranked according to their Value rating. This rating reflects what features, and how much computing power, you are buying for your dollar — essentially, "bang per buck". It is calculated by assigning scores to the features and performance of a machine, and dividing the resulting figure by the recommended retail price. Because component prices fluctuate, the distributors of the Top 10 systems are contacted every month to see if the pricing or configuration of their products has changed.

The recommended retail prices are valid at the time of going to press, but it's best to check with the vendor for up-to-the-minute pricing.

The Value rating means that a top-performing and highly configured computer may not be at the top of the list: its cost could keep it down the list. It also means that a machine that is not necessarily the fastest and best featured — but is exceptional value for money — might come in at number one.

If your main concern in buying a computer is performance, regardless of cost, use the Performance rating. It reflects how each machine performs in the SYSmark benchmark tests, which gauge the real-life performance of a system — see the SYSmark performance charts for more information.

Bus slots	Issue reviewed	Phone
ISA, PCI	August '95	(02) 417 3688
ISA, VESA	August '95	(02) 748 6788
ISA, PCI	July '95	(02) 630 3166
ISA, PCI, VESA	July '95	(02) 9955 8077
ISA, PCI	July '95	(02) 630 3166
ISA, PCI	August '95	(02) 630 3166
ISA, VESA	August '95	(02) 519 4600
ISA, PCI	Sep '95	(02) 417 3688
ISA, PCI	July '95	(02) 417 3688
ISA, PCI	June '95	(02) 519 4600

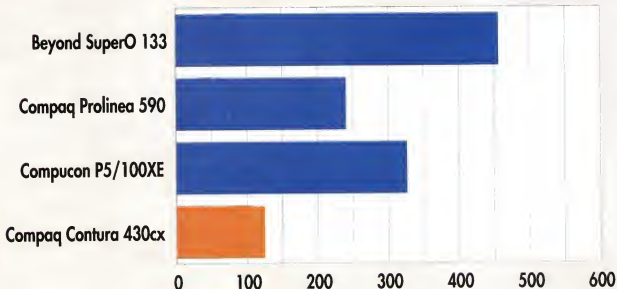
PCMCIA slots	Issue reviewed	Phone
1 x Type 3	August '95	1800 810 678
1 x Type 3	Sep '95	(02) 9911 1999
1 x Type 3	May '95	(02) 440 8855
1 x Type 4	July '95	(07) 3846 7979
1 x Type 2; 1 x Type 3	July '95	(03) 9872 6122
1 x Type 4	July '95	(07) 3846 7979
1 x Type 3	July '95	(02) 725 1233
1 x Type 3	July '95	(03) 9585 1055
1 x Type 3	June '95	(02) 887 6029
1 x Type 4	July '95	(02) 9907 1222

Total SYSmark performance

PC WORLD

PCs

Notebooks



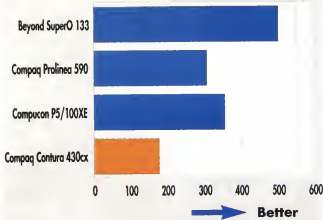
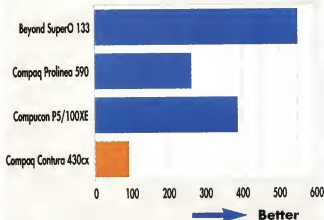
SYSmark tests the real-life performance of a system, so it gives you an idea of how productive the computer is as a unit

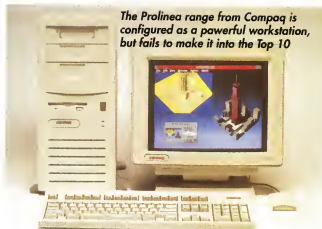


The PC World Test Centre uses the SYSmark benchmark system to grade the performance of PCs and notebooks. SYSmark tests all the components of a computer that affect its performance — not just the CPU and hard disk drive, but also the memory, bus design, CMOS/BIOS, video performance and the setup and tuning of the machine. The test runs 10 popular business applications (not simulations) — such as Word for Windows, Microsoft Excel, Lotus 1-2-3, CorelDraw and Paradox for Windows — through a range of everyday computing tasks. Depending on the performance of the system being tested, SYSmark can take several hours to complete these tasks.

Database

Desktop graphics





Beyond SuperO 133

Just to remind you, this is the as-promised high performance configuration of the same SuperO 133 we tested last month. This setup includes 16Mb of RAM, a 2Mb VRAM graphics card and a Mode 4, 1Gb Quantum hard drive. Performance is absolutely awesome: the SuperO 133 records scores that are double those of some Pentium 90s.

It is by far the fastest machine we have tested since the Top 10 began, and on the strength of its performance and configuration it debuts in the Top 10 in eighth position. The system is covered by warranty for two years, and a BBS and business-hours phone support.

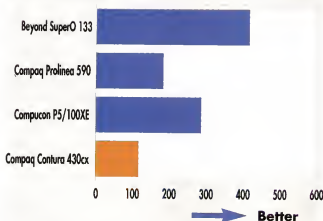
Price: \$4,399

Beyond Computers and Networks

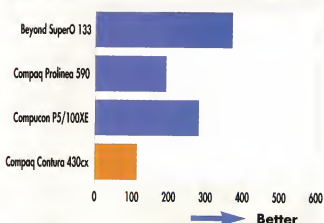
Phone: (02) 417 3688



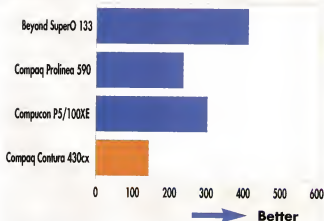
Desktop presentation



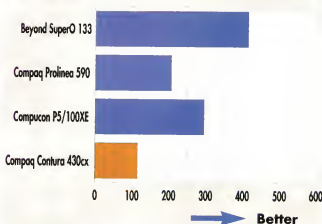
Desktop publishing



Spreadsheet



Word processing



Features — PCs

PC WORLD

	Beyond SuperO 133	Compaq Prolinea 590	Compucon P5/100XE
Motherboard	Super P55CW	Compaq	Asustek P/1 P55TP4XE
CPU	Intel Pentium 133	Intel Pentium 90	Intel Pentium 100
Cache memory	256	256	256
System bus	ISA/PCI	ISA/PCI	ISA/PCI
ISA slots	4	2	3
EISA slots	nil	nil	nil
VESA slots	nil	nil	nil
PCI slots	4	2	3
Ports¹	2s, 1p, 1g	1s, 1p, 1kb, 1mouse	1p, 2
RAM (as tested)	16Mb	16Mb	16Mb
Maximum RAM	128Mb	192Mb	128Mb
Hard drive (as tested)	1Gb	720Mb	850Mb
Maximum hard drive	4Gb	720Mb	4Gb
Monitor	15in Goldstar	15in Compaq 151FS	15in Compucon CV1596 RGLR
Video adaptor	Diamond Stealth Video 2Mb VRAM	2Mb VRAM QVision 2000	4Mb S3500
Power management	yes	yes	yes
Software included	nil	DOS/Windows; on-line documentation	DOS/Windows
Other features	nil	nil	Infra-red detection; media bus slots supporting combination VGA/s+D+Sound, VGA/Sound/MPEG, VGA/SCSI
Warranty	2 years parts/ 5 years labour	3 years limited	2 years return-to-base
Service and support	Business hours phone hotline; BBS	Phone hotline	Business hours phone hotline; BBS

¹Port abbreviations: p = parallel, s = serial, svga = Super VGA, kb/mouse = keyboard/mouse

Notebooks reviewed this month

Compaq Contura 430cx

As one of the leading portable computer manufacturers, Compaq often brings out new models to reflect the latest technology. The Contura 430 is no exception, with a 100MHz 486 processor under the hood, 8Mb of RAM and an 810Mb hard drive.

The 10.4-inch active-matrix display is very easy to read, especially at an angle. Colour saturation and resolution is very good, although the colours tend to blend together slightly when viewing multimedia movies or games.

Standard power management features include a full or partial (user-defined) shutdown after a period of inactivity,



The Dell Latitude XP75D just pips the Compaq Contura 430cx for number one position in the notebook Top 10

Features — Notebooks

Compaq Contura 430CX

CPU	Intel 486DX4-100
Weight (kg)	2.8
Dimensions (W by D by H, in mm)	229 by 302 by 56
Ports ¹	1p, 1s, 1 docking station, 1svga, 1kb/mouse
RAM (as tested)	8Mb
Maximum RAM	32Mb
Hard drive (as tested)	720Mb
Maximum hard drive	720Mb
Removable hard drive	no
Screen type	Active TFT
Screen size (inches)	10.4
Graphics adaptor	512K Cirrus Logic
Pointing device	Trackball
PC Card slots	1 Type III or 2 Type II
Power management	yes
Battery	
Stated life	3-5 hours
Type	NiMH
Hot swap	no
Software included	DOS 6.22; Windows 3.11, TabWorks, Lotus Organizer, MS-Works, Symantec Game Pack
Multimedia	none
Warranty	3yrs parts/1yr labour
Service and support	Phone support

¹Port abbreviations: p = parallel, s = serial,
svga = Super VGA, kb/mouse = keyboard/mouse

including shutting down the hard disk, LCD display or processor when not in use. Battery life is relatively long when power management is not enabled. The NiMH battery lasted 2.5 hours without power management, and up to seven hours with all power-saving features set to their maximum.

Recharging the battery took only 1.5 hours, or three hours when using the computer. The Contura is well constructed, with Compaq's renowned thoroughness, and is not likely to break easily. The computer is in the mid-range in the weight category — not too heavy, but not too light. Being carried on a shoulder all day it certainly made its presence felt, although it was not too uncomfortable.

To sum up, Compaq is now pricing its products far more competitively than before. This makes them compete

A notebook when it's out...



... a desktop when it's in. Compaq's high-scoring Contura 430cx has an optional docking station.



in price with the clones, but your money buys a respected brandname notebook with all the features for which Compaq has become famous.

The Contura 430cx is only just beaten by the Dell notebook in value for money, and debuts in second position in this month's Top 10.

Price: \$5,995

Compaq Australia

Phone: (02) 9911 1999 ■

SCREEN tests

YOU GET MORE FEATURES
FOR YOUR DOLLAR, BUT
OUR REVIEW OF 15-INCH
AND 17-INCH MONITORS
SHOWED UP SOME
TUNING PROBLEMS, SO
CHOOSE CAREFULLY

BY SPIRO HIONIS

ILLUSTRATION JIM LUDIKE. PHOTO GIUMPIERO BENEVUTI





WHEN PURCHASING A MONITOR FOR BUSINESS OR HOME USE, YOU WANT TO BE SURE IT HAS ALL THE ADJUSTMENT CONTROLS YOU NEED. FORTUNATELY, THESE LATEST SAMPLES ARE WELL ENDOWED WITH FEATURES.

THE 1995 MONITOR REVIEW SEES 11 15-INCH AND 13 17-INCH SAMPLES INVADE THE TEST CENTRE. PRICES HAVEN'T CHANGED GREATLY SINCE LAST YEAR, WITH 15-INCH MONITORS RANGING IN PRICE FROM \$485 FOR THE VOGUE TO \$1,340 FOR THE NEC MULTISYNC XE15. IN THE 17-INCH GROUP PRICES RANGE FROM \$999 FOR THE KTX VGAM170 TO \$2,841 FOR THE EIZO FLEXSCAN F563.

Although prices have not changed much there has been an increase in the number of basic features. Firstly, news that would make Jacques Chirac cry — all monitors tested comply with Swedish MPRII radiation standards. VESA DPMS and US Energy Star parameters are also being adhered to. This means that all monitors we tested are capable of going into a power-saving mode after periods of inactivity.

In the areas of ease of use and image manipulation, 15-inch monitors are shipping with virtues previously found only in their 17-inch counterparts. For example five out of 11 15-inch models had on-screen displays for their controls as compared to two out of 16 last year. Six out of 11 have colour control as opposed to five out of 17 last year. In the 17-inch class all monitors with the exception of the Magtron have some form of colour control as opposed to seven out of 15 last year.

What to look for

Important details to take into account when looking at monitors include viewable screen area, image control, and usability. A Test Centre survey was taken of 10 experienced computer users, including some graphic artists. The survey found that most people (with the exception of the artists) didn't fiddle much with their monitor controls after the initial setup. Image control was found to be of utmost importance to the artists, while most people just wanted the thing to work

out of the box. It is to your benefit to learn to use your monitor in conjunction with your graphics card to get the most out of it.

Another misconception is that 15-inch and 17-inch monitors actually give you 15 and 17-inches of viewable screen. This is not the case by any means, as part of the cathode ray tube is hidden behind the monitor case, decreasing the viewable area. Refer to the chart on page 116 for actual viewable screen diagonals of the monitors tested.

Testing this year was conducted using a punishing piece of software called Displaymate by Sonera. This test is broken up into 32 smaller tests that help determine the quality of such things as image geometry, colour registration, colour timing and mode switching. No monitor can be expected to be perfect and this was the perfect tool to find out each monitor's faults. Some of these discrepancies are apparent to the naked eye but a lot are not.

Finetuning monitors is something the manufacturer or distributor should do before it is sold. If a monitor display has obvious visible problems you can't fix, demand a replacement model that has been tuned.

Best Buys

Standing out in the 15-inch range is the new Samsung SyncMaster 15GLi. The combination of a full host of controls, a near-perfect score in the tests and a three-year warranty make it a

Best Buy in its class. In the 17-inch range NEC, Samsung, Sony and Philips all performed very well in the tests. If you can live without an on-screen display, the Philips 17B deserves a SOHO Best Buy as sheer value for money — priced \$1,000 less than the NEC and almost \$1,000 cheaper than the Sony. A corporate Best Buy goes to the NEC XP17 for being full-featured, Plug and Play ready and it has an excellent display to boot.

15-inch monitors

Sony Multiscan 15sf

The only problems with the particular sample we tested were some geometric distortion and slight moiré patterning in the top right-hand corner. Also the colour red seemed slightly out of whack during the vertical colour registration test. Generally this is not typical of Sony monitors seen in the past.

The Multiscan 15sf incorporates some pretty smart technology that Sony has devised to improve picture quality and ease of use. Geometric distortion adjustments are taken care of by an intelligent digital multiscan system which automatically adjusts screen geometry, negating the need for too many controls.

Complementing this is Sony's latest, flatter-than-ever-before Trinitron cathode-ray tube, which helps to diminish distortion problems and provides very crisp clear images all over the screen. The Sony differs from the rest by using an aperture grille instead of a shadow mask, resulting in a pitch which is 0.25 instead of the standard dot pitch of 0.28. This also improves overall picture quality and provides bright, vibrant colours. Other pros include the second-largest viewable screen area after the MAG and concise, easy-to-follow documentation, including a troubleshooting section. Still a standout monitor.

Price: \$1,160
Sony Australia
Phone: (02) 887 6666





MAG DX15F

The DX15f, priced at \$620, is one of the least expensive monitors tested. Despite this it is capable of high resolutions and refresh rates. Our tests found it to suffer from some geometric distortions and the colour timing was slightly out for the colour blue. Unfortunately it also failed the text to graphics mode switching test, with the screen remaining blank while the monitor clicked between modes.

On a brighter note (pardon the pun) it has the largest viewable screen area of all the 15-inch monitors, as well as being fully compliant with Energy Star and MPRII radiation standards, reasonably good scanning rates, a maximum resolution of 1,280 by 1,024 and, of all the 15-inch monitors tested, the highest claimed refresh rate of 100Hz at 1,024 by 768.

Price: \$620
Magtron
Phone: (02) 9975 3727

Optquest 2000DC

The first thing you may notice about this monitor is the lack of any rotary controls. Usually most digital monitors have rotary controls for brightness and contrast, but every adjustment on the 2000DC is digitally

controlled. The control panel, located on the front below the bezel, has a graphical representation of each adjustment. All are self-explanatory except for the picture of a head with the brain showing — this is the recall button. Documentation is thorough and easy to read and the 2000DC also ships with its own power management software in case you don't have your own.

Our tests found some slight distortion on the left-hand side of the screen as well as some moire patterning during the line, dot and fine dot moire tests. The only big disappointment was the monitor's failure to pass the text to graphics mode switching test. Otherwise a very nice monitor, allowing good control (including colour temperature) and usability at a very reasonable price.

Price: \$740
Keap Technology
Phone: (02) 417 7166

KTX VGAM150

You wouldn't think you could get too much for a recommended retail price of \$599, but surprise — the KTX VGAM150 is the only 15-inch monitor reviewed with a full complement of controls, all digitally controlled from the three pages of on-screen display,



including an option for self-testing. Viewable screen area is among the best but the cable length is pitifully short (forget about putting the tower under the desk and leaving this monitor on the desktop unless you're a circus midget with furniture to match). Other good points are reasonable scan rates, refresh rates and resolution capability.

On the downside our tests showed some screen distortion during pattern testing and some blurring during the resolution test. There is also a definite moire patterning problem and the colour blue was slightly out during the horizontal and vertical colour registration tests. Features abound but more stringent quality control is required. Otherwise great value for money.

Price: \$599
Edge Technologies
Phone: (02) 9906 5550

Philips Brilliance 15A

With its chrome-coloured digital controls, front panel headphone jack, volume control, built-in speakers and two-channel audio, the Brilliance 15A can't help but stick out from the crowd. Needless to say Mac users will drool at these features and, yes, it is Macintosh compatible. Viewable

The Brilliance 15A from Philips has built-in audio



Well labelled and easy to use controls on the Hitachi MVX Value

screen area is reasonable and controls are easy to use with the on-screen display.

Power management performance is among the best of all monitors tested, especially in suspend and off modes. Our tests showed some minor line and dot moire patterning as well as some minor geometric distortion at the bottom half of the screen and slight interference lines visible during the snow test. On the other hand colour registration and mode switching are perfect. Philips puts a lot of faith in its product, evidenced by the three-year warranty, and rightfully so.

Price: \$950
Clear Technology
Phone: (02) 317 5833

Hitachi MVX Value

This is one of only two monitors tested that could not produce a resolution of 1,280 by 1,024 (you would rarely use this resolution on a 15-inch monitor), although picture quality was reasonable. The only problems were minor and they turned up in the areas of colour timing, some slight screen distortion and visibility of interference lines during the snow test. There is no on-screen display to help you with the controls, but this doesn't matter as the controls are well labelled and easy to use. Power usage is quite good (90 watts maximum), with power saving

dropping this to 15 watts in suspend mode. Hitachi provides a two-year warranty for its product and this is always a good sign.

Price: \$840
Hitachi Australia
Phone: (02) 9929 8799

Samtron SC-528UXL

Unfortunately not much has changed since we last tested the SC-528UXL in the October 1994 issue of *PC World*. Picture quality hasn't improved, with our tests finding geometric distortion problems as well as some line moire patterning. Of most concern was the inability to complete the text to graphics mode switching test. Still, controls are easy to use, power usage and management are above average, as is the three-year warranty that is provided. Hunt carefully because a well tuned unit would be value for money.

Price: \$699
Samsung Information
Phone: (02) 9955 3888

NEC MultiSync XE15

NEC has been making monitors for a long time, so when they come out with new models it's always exciting. The XE15 features on-screen controls, is Plug and Play ready, is Mac and Power Mac compatible and ships with its own power management software.

NEC uses what it calls its flat square CRT technology to reduce geometric distortion and improve picture quality. Glare is combated by NEC's OptiClear surface and you also have the option of using NEC's Colorific software to match screen output to printed output. The XE15 has a full complement of controls, including colour temperature, which can all be set from the on-screen display.

Despite all this our tests found some fault with this particular sample in the form of slight geometric distortions, moire patterning, some interference lines during the snow test and intermittent screen bounce and distortion during the mode-switching test. This model should have an excellent display quality considering the Rolls-Royce price of \$1,340 and the three-year warranty provided.

Price: \$1,340
NEC Home Electronics
Phone: (02) 868 1811

Vogue 1515DL

The Vogue, at under \$500, has the distinction of being the cheapest monitor in the review. It has the same resolution and scanning capabilities as the more expensive monitors but lacks picture quality.

Our tests found it suffers from pronounced moire patterning, screen regulation distortion, as well as some ▶

Features — 15in monitors

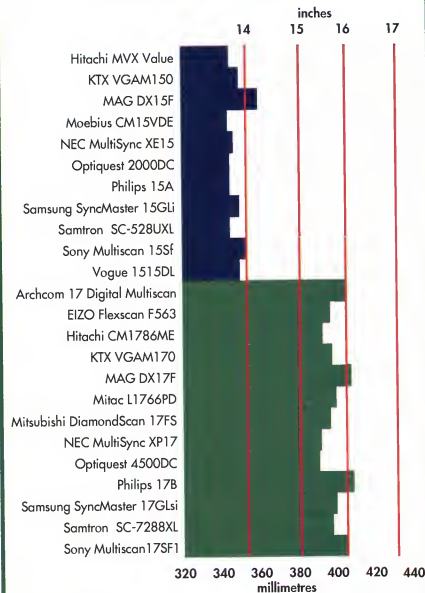
	Hitachi MVX Value	KTX VGAM150	MAG DX15F	Moebius CM15VDE	NEC MultiSync XE15
Recommended retail price	\$840	\$599	\$620	\$600	\$1,340
Warranty	2 years	1 years	1 year	2 years	3 years
Standard features					
Horizontal scanning frequency (kHz)	24 to 64	30 to 64	24 to 64	31.5 to 56.5	31 to 65
Vertical scanning frequency (kHz)	47 to 104	50 to 90	50 to 90	50 to 90	55 to 120
Dot/stripe pitch (mm)	0.28	0.28	0.28	0.28	0.28
Maximum non-interlaced resolution supported	1,024 by 768	1,280 by 1,024	1,280 by 1,024	1,024 by 768	1,024 by 768
Maximum refresh rate at 1,024 by 768 (Hz)	70	75	100	70	76
Dimensions (W by D by H, in mm)	362 by 377 by 358	465 by 555 by 460	360 by 405 by 370	370 by 343 by 380	371 by 409 by 393
Weight (kg)	13	14	13.13	12.3	15.5
Power profile¹					
On mode (watts consumed)	90	72	110	85	100
Stand-by mode (watts consumed)	n/a	n/a	n/a	55	n/a
Suspend mode (watts consumed)	15	25	20	55	<15
Off mode (watts consumed)		5	8	55	<8
Standard controls					
Reset/recall	yes	yes	yes	yes	yes
On-screen display	no	yes	optional	no	yes
Number of preset video modes	9	14	8	5	12
Number of user-programmable video modes	15	14	1	5	6
Manual degauss	no	yes	yes	no	yes
Pincushion/barrelling	yes	yes	yes	no	yes
Trapezoid adjustment	yes	yes	no	no	yes
Parallelogram	no	yes	no	no	yes
Screen rotation	yes	yes	no	no	yes
RGB colour adjustment	no	yes	no	no	yes
Other	n/a	n/a	n/a	n/a	n/a

¹All monitors comply with Energy Star, MPRII and VESA DPMS energy and radiation standards

PC WORLD

Optquest 2000DC	Philips Brilliance 15A	Samsung SyncMaster 15GLI	Samtron SC-528UXL	Sony Multiscan 15sf	Vogue 1515DL
\$740	\$950	\$933	\$699	\$1,160	\$485
1 year	3 years	3 years	3 years	1 year	1 year
30 to 65	30 to 66	30 to 65	30 to 64	31 to 64	30 to 65
50 to 110	50 to 110	50 to 120	50 to 100	50 to 120	50 to 100
0.27	0.28	0.28	0.28	0.25	0.28
1,280 by 1,024	1,280 by 1,024	1,280 by 1,024	1,280 by 1,024	1,280 by 1,024	1,280 by 1,024
78	80	76	76	76	87
368 by 402 by 376	367 by 384 by 395	373 by 400 by 393	453 by 445 by 485	368 by 384 by 373	356 by 376 by 358
15.5	13.5	13.5	16	14	14
110	100	<90	85	110	80
<25	90	<70	15	n/o	<1.5
<25	<15	<10	n/o	24	<1.5
<25	<5	<5	5	16.8	<1.5
yes	no	yes	yes	yes	no
no	yes	yes	no	yes	no
8	15	11	12	6	5
7	7	11	8	10	5
yes	yes	yes	yes	no	yes
yes	yes	yes	yes	yes	yes
no	yes	yes	no	no	no
no	no	yes	no	no	yes
yes	no	no	no	yes	yes
yes	no	yes	no	yes	yes
n/o	Mac-compatible, inbuilt stereo speakers, two-channel audio in, volume control, headphone sockets	n/o	n/o	n/o	n/o

Diagonal screen sizes



Putting it simply, a '15-inch' monitor does not have a diagonal screen measurement of 15 inches, and the same applies for 17-inch monitors.

Only two of the 15-inch monitors tested even make it to a 14-inch diagonal, while the 17-inch monitors we measured average less than a 16-inch diagonal

geometric distortion and the existence of some interference lines during the snow test.

To its credit viewable screen area is among the best; it switches from text to graphics mode beautifully and colour timing is good. If you do buy one and find these problems there is a one-year warranty. Although the picture quality isn't the best it is still Energy Star, MPRII and VESA DPMS compliant, which is surprising for a monitor so cheap.

Price: \$485

Also Technology

Phone: (02) 519 4600

Moebius CM15VDE

The Moebius, along with the NEC and the Hitachi, are the only 15-inch monitors not capable of a 1,280 by 1,024 resolution. Aside from this it stands out as the monitor with the least number of user controls over geometric distortion. Our tests found slight problems with geometric distortion, colour timing, regulation and the appearance of interference lines during the snow test.

Despite the cons it does switch perfectly between graphics and text modes and it also stands out as the only monitor with a "zoom" feature. Other manufacturers take note. The zoom feature allows the image on screen to scan out to the bezel with the touch of one button, as opposed to fiddling with the horizontal and vertical size and positioning controls. Documentation is in the form of a 17-page booklet and the monitor comes with a one-year warranty.

Price: \$600

TodayTech Computers

Phone: (02) 9955 8077

Samsung 15GLi

This monitor took the Test Centre completely by surprise. As a package it is hard to beat in its class. It is one of the lightest monitors tested, weighing in at 13.5kg, while being anything but lightweight in its features. From the drop-down control panel you can access an on-screen display that allows you easy control over geometric distortions and colour temperature

as well as 11 factory presets and 11 user modes. The 15GLi was also the most successful 15-inch monitor in our tests, with the only problems found being some slight interference lines during the snow test and some screen glare (which all the monitors suffered from). Documentation is excellent and comes in the form of two books. One is a small book covering everything you need to know about your monitor in an easy-to-read format. The other is the user's manual. The actual viewable screen diagonal of 350mm is quite good (only the Sony and the MAG had a larger area), while the detachable monitor cable, at 1.85 metres, is the longest of the 15-inch monitors reviewed. With a price of \$933 and a three-year return to base warranty to complement it the Samsung 15GLi (also Macintosh compatible) is definitely the Best Buy for the 15-inch class.

Price: \$933
Samsung Electronics
Phone: (02) 638 5200

17-inch monitors

Archcom 17 Digital Multiscan

The Archcom is the second-cheapest monitor in the 17-inch review. It has a digital LCD display that allows you to see which controls you are accessing, as well as the current video mode. Viewable screen area is quite good, as is the dot pitch of the screen. Controls are relatively easy to use after browsing the manual.

Our tests found some slight problems in the following areas: trapezoidal distortion at the top of the screen; moire patterning; horizontal and vertical colour registration problems; and some line interference during the snow test. Documentation is good and includes a troubleshooting section. Some power management software is also shipped. Archcom backs its monitor with a two-year return to base warranty.

Price: \$1,266
Archcom
Phone: (02) 558 9288

KTX VGAM170

The VGAM170 is the lowest-priced 17-inch monitor in the review. It is also full-featured (like the 15-inch KTX), allowing control over screen geometry and colour regulation, and has a total of 28 preset modes, 14 of which are user programmable. Power usage is the best in its range and it complies with radiation and VESA DPMS standards. Despite all its features it is let down by its picture quality.

Our tests found the top of the screen to be blurry, with geometric distortions detected on the top left-hand side of the screen also resulting in resolution problems. Moire patterning was also a problem as well as colour registration, screen, and local regulation distortion, slight ghosting at the bottom of the screen, as well as some interference lines during the snow test. On the good side of things controls are easy to use, price is incredible and there is a one-year warranty. There is potential here for greatness with some good quality control.

Price: \$999
Edge Technologies
Phone: (02) 9906 5550

Mitsubishi DiamondScan 17FS

The 17FS has actually dropped in price since we last tested it, but it hasn't dropped any features in the process. It is still fully compliant with all the relevant standards for power and radiation, still Macintosh compatible and still has a three-year warranty.

The other interesting feature of the Mitsubishi is an extra cable that plugs into a DIN socket in the back of the monitor and into the nine-pin serial port on your computer. You then load up the Diamond Control software that is shipped with the monitor and you suddenly have on-screen control of the monitor's geometry and colour. This takes screen control as we know it one step further as it creates its own group and icons in Windows, and once you run in there is a comprehensive help section in case you get stuck.

Our tests found a few problems. The sample we tested produced some

geometric distortion in the right-hand side of the screen, while resolution in the corners could have been better. Colour registration and timing were slightly out for blue, interference lines appeared during the snow test and there was some screen regulation distortion. Other than this controls are easy to use, documentation is quite good and there is the three-year warranty.

Price: \$1,902
Mitsubishi Electric
Phone: (02) 684 7262

Samsung SyncMaster 17GLsi

The 17GLsi crosses the boundary into the above-\$2,000 price bracket and accordingly is full-featured as far as geometric and colour controls go, while also giving the option of either d-sub or BNC connectivity. Along with the Optquest it is a beast in the resolution department, capable of 1,600 by 1,200dpi. It is also the lightest of the 17-inch models, weighing in at 18kg. For all its good points, our tests showed that it didn't match its stablemate, the 15GLi, for picture quality.

While still good, it did have problems with raster lines, some elliptical image distortion, slight horizontal colour registration problems with blue, and it also displayed some interference lines during the snow test. It does share the same drop-down control panel, excellent documentation and three-year warranty as the 15GLi. Still good value.

Price: \$2,116
Samsung Electronics
Phone: (02) 638 5200

Sony Multiscan 17SF1

As the third-priciest monitor in the comparison, the Sony incorporates all of the technological advances and feature of its smaller stablemate, the Multiscan 15SF. Picture quality is quite good, with the exception of some colour registration and timing problems with blue, some visibility of raster lines, interference lines during the snow test and some screen and local regulation distortion.

One other problem was the appearance of two very fine horizon- ➤

Features — 17in monitors

	Archcom 17 Digital Multiscan	EIZO Flexscan F563	Hitachi CM1786ME	KTX VGAM170	MAG DX17F	Mitac L1766PD
Recommended retail price	\$1,266	\$2,841	\$1,530	\$999	\$1,420	\$1,290
Warranty	2 years	3 years	2 years	1 year	1 year	3 years
Standard features						
Horizontal scanning frequency (kHz)	30 to 80	30 to 86	30 to 64	30 to 64	30 to 64	30 to 66
Vertical scanning frequency (kHz)	50 to 100	55 to 160	50 to 100	50 to 90	50 to 100	50 to 90
Dot/stripe pitch (mm)		0.26	0.26	0.28	0.26	0.28
Maximum non-interlaced resolution supported	1,280 by 1,024	1,280 by 1,024	1,280 by 1,024	1,280 by 1,024	1,280 by 1,024	1,280 by 1,024
Maximum refresh rate at 1,024 by 768 (Hz)	70	100	70	75	100	70
Dimensions (W by D by H, in mm)	420 by 420 by 420	410 by 445 by 413	410 by 445 by 400	550 by 530 by 540	407 by 434 by 428	400 by 425 by 433
Weight (kg)		20	20.6	17.5	23	18.5
Power profile¹						
On mode (watts consumed)	100	95	125	90	120	120
Stand-by mode (watts consumed)	<20	<10	n/a	72	n/o	<30
Suspend mode (watts consumed)	<20	n/a	15	25	30	<5
Off mode (watts consumed)	<3	<5	n/a	5	5	<5
Standard controls						
Reset/recall	yes	yes	yes	yes	yes	yes
On-screen display		yes	no	yes	no	yes
Number of preset video modes	1	10	10	14	15	10
Number of user-programmable video modes	3	12	4	14	8	10
Manual degauss	yes	yes	yes	yes	yes	yes
Pincushion/barrelling	no	yes	yes	yes	yes	yes
Trapezoid adjustment	yes	yes	no	yes	no	yes
Parallelogram	no	yes	no	yes	no	no
Screen rotation	yes	yes	yes	yes	yes	no
RGB colour adjustment	no	yes	yes	yes	no	yes
Other	n/a	n/o	n/o	n/a	n/a	n/a

¹All monitors comply with Energy Star, MPRII and VESA DPMS energy and radiation standards

PC WORLD

Mitsubishi DiamondScan 17FS	NEC MultiSync XP17	Optiquest 4500DC	Philips 17B	Samsung SyncMaster 17GLsi	Samtron SC-7288XL	Sony 17SF1 Multiscan
\$1,902 3 years	\$2,715 3 years	\$1,400 1 year	\$1,650 3 years	\$2,116 3 years	\$1,850 3 years	\$2,511 1 year
30 to 78	31 to 82	30 to 82	30 to 66	30 to 85	30 to 65	31 to 64
50 to 130	55 to 160	50 to 100	50 to 100	50 to 120	50 to 100	50 to 120
0.28 1,280 by 1,024 76	0.28 1,280 by 1,024 76	0.28 1,600 by 1,280 75.78	0.28 1,280 by 1,024 75	0.26 1,600 by 1,200 100	0.28 1,280 by 1,024 76	0.25 1,280 by 1,024 80
410 by 436 by 406 21.5	471 by 489 by 433 23.5	411 by 430 by 415 22.2	417 by 426 by 446 18.5	428 by 439 by 420 18	538 by 547 by 558 25	406 by 451 by 427 19
120 100	147 n/o	150 <25	100 90	<120 <100	100 60	240 n/a
30	<15	<25	<15	<15	30	24
8	<8	<5	<5	<5	8	14.4
yes no	yes yes	yes no	no yes	yes yes	yes yes	yes yes
6	21	8	13	11	12	6
4	7	7	24	11	11	10
yes yes yes no yes yes n/a	yes yes yes yes yes yes n/o	yes yes no no yes yes n/o	yes yes yes yes no yes Mac-compatible, inbuilt stereo speakers, two- channel audio in, volume control, headphone sockets	yes yes yes yes yes yes n/a	yes yes yes yes no yes n/a	no yes no no yes yes n/o



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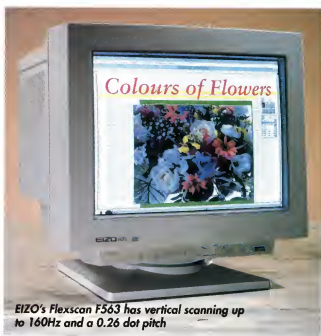
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EIZO's Flexscan F563 has vertical scanning up to 160Hz and a 0.26 dot pitch



Magtron's DX17F employs flat screen technology

tal lines across the screen. On the plus side it is the fourth-lightest of the 17-inch monitors. Documentation is good as is ease of use, but a three-year warranty to bring it in line with the other major manufacturers would be better.

Price: \$2,511
Sony Australia
Phone: (02) 887 6666

Philips 17B

Despite the fact that the 17B sent to the Test Centre looked like it had been 15 rounds with a 25-stone ex-Soviet shotputter (thanks guys), it performed quite well. Controls are more comprehensive than the 15A and include colour adjustments, some more geometric adjustments, as well as a whopping 24 places for user-programmable video modes. Geometric distortion was almost non-existent, displaying only very minor distortion in the top right-hand corner during the circular pattern test.

The only other problems were some fine dot moiré patterning, a minor colour registration problem with blue and the appearance of some interference lines during the snow test. Of course the 17B is Macintosh compatible and also features two-

channel audio input, inbuilt speakers, headphone socket and volume control. Features, performance, three-year warranty and price make it very good value for money.

Price: \$1,650
Clear Technology
Phone: (02) 317 5833

EIZO Flexscan F563

The outright most expensive monitor in the entire review also has features to match. These include vertical scan rates up to 160Hz, 0.26 dot pitch, excellent power management and the most amazing on-screen controls — including controls for moiré reduction. These controls work in conjunction with a pushbutton rotary knob setup. The EIZO also has the option for BNC connectivity, excellent documentation, including a quick reference card, a maintenance port (DIN plug) that allows for full control over features, with optional software. It even has its own cleaning cloth.

The only problems our tests found were some minor distortion during the circular pattern test, some local regulation distortion and a little bit of screen bounce when switching between text and graphics modes. A class act (with a three-year warranty)

among a tough field if you're willing to fork out the bucks.

Price: \$2,841
Itochu Australia
Phone: (02) 239 1500

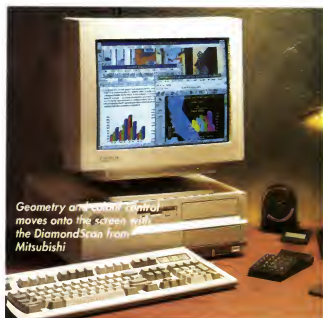
Samtron SC-7288XL

Last time we tested monitors, the 17-inch Samtron was a rebadged 17-inch Samsung — not so this time. With the exception of screen rotation the SC-7288XL has a full complement of controls, an on-screen display, a three-year warranty and is priced under \$2,000. Our tests found it to have a few problems, including some minor geometric distortion at the bottom of the screen, minor fine dot moiré patterning, poor resolution at the top right-hand side of screen and some interference lines during the snow test. Overall picture quality was quite good as these problems were only slightly evident. Very good value for the asking price.

Price: \$1,850
Samsung Information
Phone: (02) 9955 3888

MAG DX17F

Priced at just under \$1,500 the DX17F boasts features such as 0.26 dot pitch, >



Geometry and colour control moves onto the screen with the DiamondScan from Mitsubishi



Samsung's SC-7288XL has a full complement of controls and an on-screen display

Invar shadow mask, flat square picture tube technology and the capability for up to 1,280 by 1,024 resolution in non-interlaced mode. Testing showed up some slight problem with geometric linearity in the top right-hand side of screen, raster line visibility, fine dot moire patterning, horizontal colour registration problems, screen and local regulation distortion and some screen bounce during the text to graphics mode switching test. Still a very reasonable monitor for the price asked.

Price: \$1,420

Magtron Monitors

Price: (02) 9975 3727

Hitachi CM1786ME

At just over \$1,500 with a dot pitch of 0.26, high scanning rates, high non-interlaced resolution capabilities and a two-year warranty, the CM1786ME is an attractive, compact package. The tests yielded some moire patterning, a colour registration problem with blue and some screen regulation problems. Documentation is quite adequate and it also ships with its own power management software. Controls take a little getting used to, but a glance at the manual clears things up.

Price: \$1,530

Hitachi Australia

Phone: (02) 9929 8799

NEC MultiSync XP17

As the second most expensive monitor in the review, you would expect a few goodies such as BNC connectivity, Mac compatibility and high performance for your dollar. The XP17 delivers, with a full complement of controls for image and colour manipulation through a user-friendly on-screen control panel and special features such as "Access.bus", which is an industry standard bus on the back of the monitor allowing you to daisy chain up to 125 devices. This complements other features such as flat square tube technology, Invar shadow mask and antistatic screen. Documentation is thorough and easy to follow and NEC backs its product with a three-year warranty. Our tests found picture quality to be above average, revealing only a slight problem with colour registration for red, slight corner resolution hassles and some raster line visibility. A heavy-duty monitor with a heavy-duty price.

Price: \$2,715

NEC Home Electronics

Phone: (02) 868 1811

Optiquequest 4500DC

The 4500DC is an easy-to-use monitor similarly set up to its 15-inch relative the 2000DC. Unfortunately picture

quality was not as good as the 2000DC (with the exception of mode switching, which the 4500DC performed perfectly). Our tests found the test monitor suffered from some background interference, minor geometric distortion, moire patterning, vertical colour registration was out for blue, horizontal colour registration was out for green, as well as screen and local regulation problems. On the upside colours are bright and vibrant and resolution in general is quite good. Still not too bad for \$1,400.

Price: \$1,400

Keop Technology

Phone: (02) 417 7166

Mitac L1766PD

Ease of use is a key feature of the L1766PD. On-screen controls (although lacking parallelogram and rotation controls) make screen adjustments seem like child's play, while documentation is easy to follow. Our tests found only some minor geometric distortions and some local and screen regulation problems. Viewable screen size is reasonable, while price is excellent at \$1,290, complementing Mitac's three-year limited warranty.

Price: \$1,290

Mitac Australasia

Phone: (03) 9585 1055 ■

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SOHO PC

Small Office, Home Office

SEPTEMBER 1995



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GRAPHICS FILE MANAGERS ~ p130

The facts about fax

Using your PC as a FAX machine

Sue Bushell

Hands up, all those who own a fax modem and some fax software but who still send all their faxes from their fax machine? Don't be embarrassed now, it'll be our secret. No-one else need ever know.

Besides, by the time you have finished reading this article, you may just have decided to become a convert to an entirely new mode of fax communications.

With so much publicity about modems as a path to the Internet and other on-line services, it has become easy to lose sight of the other major benefit of the fax modem: with the right modem and software, you can conscript any personal computer into double duty as a fax machine.

Banksia estimates up to 80 per cent of information sent by a fax machine started out as some form of data in a word-processing, database management, spreadsheet or drawing

program on a PC, so why not cut out the middleman?

Faxing directly from your PC not only lets you take fuller advantage of the PC's power and functionality, but can also provide several improvements over the traditional faxing process, with relatively few drawbacks.

For instance, why walk a document to the fax machine, possibly stand in line for your turn at that machine, dial the number by hand, then wait for confirmation that the fax has arrived intact, when you could achieve the same purpose in much less time direct from your desktop PC? Why print out the document in the first place if it was generated by computer, unnecessarily consuming paper and toner and causing wear and tear on both your printer and fax machine?

Why spend a fortune publishing and mailing sales or marketing mate-

rials to a network of distributors or clients when you can quickly and simply fax them the same material from your PC?

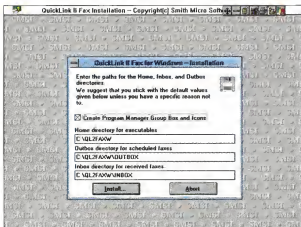
Why allow material you rely on to make a favourable impression on your clients to be scanned by your fax machine before broadcast, and perhaps fed in crooked, when you can send a much cleaner and sharper image direct from your PC files?

Desktop fax modems have revolutionised the faxing process, offering many of the same benefits as e-mail. Better still, in most cases faxing a document under Windows is as simple as printing that same document. If you can print a file to your printer, you can fax it, simply by setting up your fax modem as an installed printer.

You can also send faxes to many locations at pre-scheduled times, without having to individually handle each one. Thanks to automatic scheduling and batching, with some fax products you don't even have to be present when the faxes are sent. The following discussion assumes you purchased a fax modem in the first place: you cannot send faxes from an ordinary data modem.

Fax software

The software portion of a PC fax product is responsible for controlling the fax modem, converting files into fax format, and providing the user interface. Most fax modems are shipped with "free" fax software which comes with fairly basic capabilities. Banksia, for instance, provides



Most fax software ships with an installation program to guide you through the setup

QuickLink II with all its products. Many of these free versions are called Lite software. Using the typical Lite software package you can send and receive faxes, view a received fax on screen, and possibly print it, but you will usually not be able to edit it.

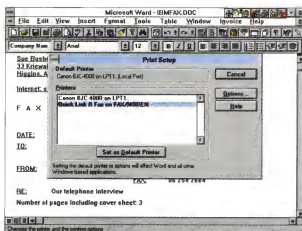
To edit or otherwise manipulate a received fax file you have two options: you can either edit the file using a "paint" program that will accept the fax, or pass the file through an OCR program which will attempt to convert the image into ASCII (or word processing file format). Upgrading your Lite fax software will usually provide you with OCR capabilities. For example WinFax Pro retails for \$249, but you can upgrade your free Lite version for just \$99. QuickLink II upgrades to QuickLink Gold, which allows received faxes to be converted into text and other enhancements, and which can be ordered on-line or from resellers.

An alternative to dedicated fax software is the fax capability which comes under Windows for Workgroups, which ships with Microsoft At Work PC Fax. Under Windows for Workgroups and other Class 1 fax software, you can send a fax, an e-mail and a file to a single recipient for the cost of a single phone call.

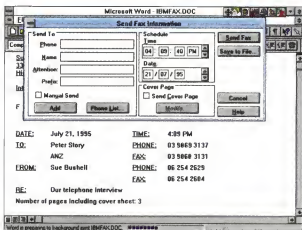
Fax features

Like e-mail systems, some fax programs give you an on-line phone book from which you can conveniently address your messages to one or dozens of people. You can configure many faxing systems to notify you when the document has been received at the other end, saving you the time and trouble of monitoring the process. Computerised faxing even provides at least one benefit that e-mail can't match: not everyone's on the Internet, but almost every company has a fax.

The only real difference between sending an e-mail message and a fax from your PC is in the way you address it. A fax will typically consist of a typed message and can also include a cover sheet and attached documents, which may be just about any printable file on your PC.



To send a fax from within an application you need to choose your fax driver from the Printer list



After selecting Print a dialogue box appears that asks you to type in information about where the fax is being sent

Better still, you don't have to save a separate copy of each document unless you want to, because most fax software has a Send Log where it keeps a record of every document you have faxed. "I have one that goes back a year and a half," says Simeon Kemp, dealer/manager for Mike Boome Electronics, distributors of the Spirit range of modems.

"I can bring up any fax on my screen in seconds from that list. You always have a copy of any fax you sent, so there's no more hunting for that piece of paper you sent someone last week."

Setting up your fax software

Let's examine the process of setting up your fax software. With most dedicated fax software, you will simply need to run the installation program supplied, and the software should lead you through the rest.

You will be asked to confirm the installation directory, inbox directory for received faxes and outbox directory for scheduled faxes. You may be asked to fill in a user registration box, and provide details of your modem phone number and contact name, etc, and then to select your brand of modem from a pull-down list.

You will typically be asked if you want your fax driver to be your Windows default print driver. Click No if you want to keep your regular printer driver as the default; or Yes if you want the fax driver to be the default printer. This setting can be changed at any time with the Windows Control Panel, or by selecting Print Options from within an application.

Once the software is installed, you will typically be able to run the fax main application by opening its Program Group under Windows. The ▶

first time the program runs you will need to tell it which Com Port your modem is connected to, in the Modem Setup dialogue box.

The process of setting up integrated fax software like Microsoft At Work PC Fax is slightly different. Microsoft advises users to make sure they have adequate disk space before starting to use PC Fax, since you need approximately 80K of disk space for each fax page. You must also disable any fax software other than PC Fax, since you can only use one fax application with a modem at any one time.

In Windows for Workgroups, you configure your fax modem by choosing the Fax icon in the Control Panel window. If you have already set up Microsoft Mail and connected to a post office, the Fax Modem's dialogue box appears. Otherwise, the Microsoft at Work Fax dialogue box appears. Select Email and Fax if you plan to use Mail to send mail messages to others on your network. Select Fax Only if you won't be using Mail to communicate with others via messages.

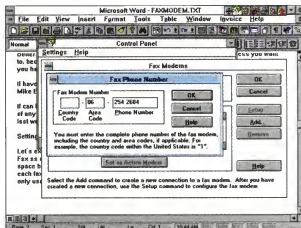
In the Fax Modems dialogue box, choose Add. The Add Fax Modems dialogue box appears, giving you the chance to select the type of fax modem you want to add. Provide your Fax Phone Number in the appropriate dialogue box, then set up your type of modem in the Fax Modems dialogue box, Setup.

Remember to specify your fax modem as the active modem in the Fax section of the Control Panel.

Sending a fax

In Windows for Workgroups, send a fax either from Mail, or from any application. To send a fax from an application, you MUST first make sure Mail is running by clicking the Mail icon in the Network Group. To send a fax direct from Mail, first select Compose, then fill in the recipient's name and phone number, subject, and message in the dialogue box supplied. Click on Send.

Sending a fax directly from an application works more or less the same way, whichever fax software you are using. Your modem must be switched on. Choose your fax driver



Choose the Fax icon in the Control Panel to bring up the Fax Modems dialogue box to configure your fax modem

in the Printer List of the Windows application. Then choose Print from the File Menu. A dialogue box will appear asking you to type in the name and address of the person or company and their fax number. You will usually be asked to click another button if you wish to send a cover sheet with your fax. Then click OK to send the fax, and sit back and wait for the message to go. If your modem speaker is on, you should shortly hear the modem dialling the phone number.

Most fax software will have some means, perhaps a status log, of displaying the status of the fax. If a fax does not go through the first time, either because the line is busy or through a general failure, the fax program will usually have a default setting for retries, and the waiting period between attempts.

Drawbacks

Receiving faxes is a slightly different matter. One drawback with fax modem boards is that they require you either to leave your PC on day and night, burning power and wearing itself out, or to turn on your PC when you're expecting a fax, which is not always convenient. Some people may prefer to still use their fax machine to receive faxes, keeping the fax modem for sending faxes only.

"For a professional I would recommend a fax machine for receiving faxes, but for an amateur home user receiving the odd fax the fax modem is okay," Kemp says.

Printing received faxes can also be quite slow, since a received fax is actually one enormous graphics image. Also, even with multitasking under Windows, you will find your machine's performance will probably slow down while a fax is coming in, although Kemp says this is not usually the problem you might expect.

"It is a funny thing — if you have ever watched anybody sending or receiving a fax on the computer, you will see them sit there and twiddle their thumbs and marvel at the technology.

"It is all very well to say you can keep on working while a fax is coming in, but I have never seen anybody do it: they always sit and watch the fax go through anyway," Kemp said.

If you are trying to run an office on a tight budget, you may want to use a single phone line for all voice, fax and data transmissions. There are a number of devices on the market which aim to distinguish between an incoming voice, fax, or data call and route the call appropriately. These fax switches attach to the phone line and then the other devices (your normal voice phone/answering machine, fax machine, data modem) are attached to the fax switch).

Troubleshooting

Ensure no more than one communications program or fax program is running on computer at any time, or you are likely to run into conflicts.

Check you have told the software the right Com Port for the modem. ■

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Clip art CONTROL

Late at night, deep inside my computer, TIFFs were mating with GIFs, multiplying at an alarming rate. There was no other explanation — by morning, another 10Mb of new graphics files had appeared on my hard disk.

Well, maybe that isn't the only explanation. More likely, every Tom, Dick, and word processor was dumping a ton of clip art into my system. WinWord added some, as did Microsoft Publisher, Quattro Pro and CorelDraw. And I've downloaded plenty of pictures from BBSs myself. So I shouldn't have been surprised when I recently discovered I had 1,562 clip art files taking up over 30Mb of hard disk space. These files included two-dozen Santa Claus drawings and more than 60 graphic renditions of a computer.

Now when I install a new application, I seriously consider turning off the "Install Clip Art?" option. I usually don't, however; now my strategy

is to examine the clip art once it's installed and weed out what I don't like. Don't bother trying this with Windows' File Manager, though — if you can't see the art, you can't judge it. Programs like PC Tools' File Manager replacement let you look at your pictures, and it'll do in a pinch. But the best tools I've found for trimming and organising my clip art collection are shareware masterpieces.

Share the load

My favourite of these is ThumbsPlus from Cerious Software. What first attracted me to ThumbsPlus was its ability to scan my entire hard disk, find all my graphics files, and display 63 of them at a time as tiny thumbnails (I use 1,024 by 768 resolution). In minutes I was able to locate and organise each and every picture on my drive, browsing through hundreds of thumbnails, viewing them full size when necessary and immediately comparing images. I quickly

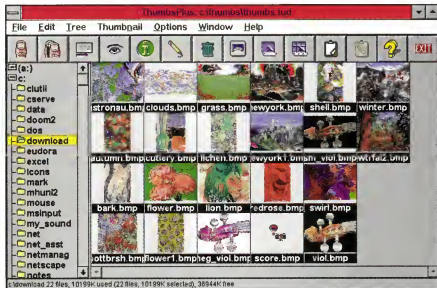
got rid of redundant Santas and dragged and dropped files into more appropriate directories. ThumbsPlus handles more than 21 file formats, including Kodak PhotoCD images and TrueType fonts. And it can convert your files into seven of those formats.

However, what I really like about ThumbsPlus is how it uses DOS directories. I tend to group files of various types into directories by content or project, and ThumbsPlus makes it easy. Not only can I move and copy files, but I can create new directories and change the volume label on floppies.

If I weren't so enamoured of directories, I'd use JASC's Media Center — it's even more powerful than ThumbsPlus. In addition to supporting more than 30 image formats, Media Center catalogues and plays Windows sound and music files (.WAV and .MID), as well as video and animation files (.AVI and .FLC). This is a great feature for those who collect multimedia clips. And when it comes to the art of converting graphics file formats, Media Center beats ThumbsPlus hands down: it offers 24 conversion formats, compared with ThumbsPlus's seven.

Media Center uses an album metaphor to get you organised, letting you gather together, say, your holiday files, independent of what directory they're in. You can add descriptions and keywords to your pictures, making future searches much easier. And since Media Center remembers where your files are, it's great for tracking clip art collections on CD-ROM.

— Steve Bass



My collection of psychedelic images as portrayed by ThumbsPlus. The directory-based interface and toolbar couldn't be easier to use

Graphics file managers

Media Center 2.02

Price: \$69

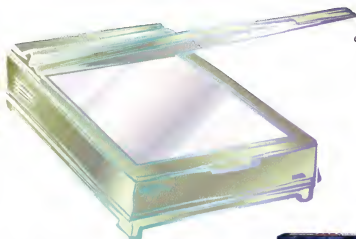
ThumbsPlus 2.0d

Price: \$80 (includes postage and a free upgrade)

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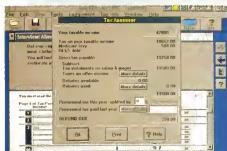
Info-line 1800 800 548

SOHO SOLUTIONS

Tax help

Dread the thought of filling in your tax return? Don't want to spend the money going to a tax agent? QuickTAX 95 may be what you're looking for.

It is a Windows-based program designed to help you sort out your tax matters and does not require that you be an expert.



QuickTAX 95 is a tax agent on disk that can help you fill in your tax return

gains; and an Auditor function that alerts the user to possible audit situations.

It is the only disk Australia Post will accept for electronic lodgement of a return.

The program is tax deductible and sells for \$49.

Intuit Australia

Phone: (02) 562 7922

Low-cost drawing

AzzWare Draw! is a Windows-based drawing application that sells for \$9.95.

It includes bezier/line drawing tools such as square, circle, line, curve, pencil and text tools, as well as tools for drawing shapes such as stars, polygons and gears.

The program lets users rotate, flip, and mirror text and objects. Text can be edited, made to follow a curve or curved baseline, and can be edited on the line or curve. You can also select line width, style, colour and fill colours. It incorporates pop-up hints, a Toolbar and floating Toolboxes, and mini tutorial movies.

The program works with Windows 3.1, Windows for

Workgroups 3.11 and Windows 95.

AzzWare Draw! Accessories will also be available. They are add-ons that let the user add functions to the base product as the need arises. The Accessories will include Desktop Publishing Accessory; Drawing Tools I and II, which allows users to use gradients, patterns, replicate borders etc; a Charting Accessory that includes more than 20 different chart types such as polar, pie and line; and a Carousel Slide Show Accessory. There will also be four clip art and two font accessories. The accessory packs will sell for \$9.95 each.

Software Suppliers
Phone: (02) 888 1955

Two-in-one answering machine

If you run an office from home and use your answering machine for both personal and business use, the Shimasu answering machine may be a welcome addition to your home.

It features four voice mailboxes, giving you the ability to store messages in four different locations and separate business and personal calls.

Based on digital technology, it does not require tapes to operate and includes a time and day stamp that automatically inserts the day and time at the end of the incoming messages.

Other features include message interrupt, remote operation and selective save and erase.

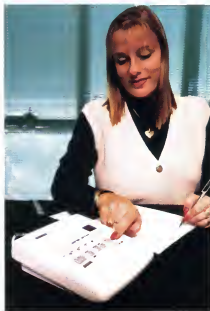
Message interrupt is aimed at users who like to screen calls. The greeting or incoming message can be interrupted by picking up the phone.

Remote operation lets users enter a three-digit code to listen to messages, change the outgoing message or turn the machine on from a tone telephone.

The Shimasu answering machine sells for \$149.

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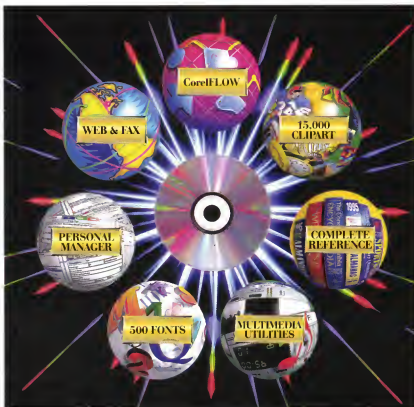
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By Andrew Kent

Vested interests in electronic commerce

Electronic commerce means different things to different people.

Those of us who currently pay for the groceries using EFTPOS could rightly consider ourselves to be utilising electronic commerce. There is also the traditional view of electronic commerce as business conducted via EDI/EFT. And now the Internet and other on-line services are presenting an increasing array of electronic commerce possibilities. Combine this with widespread credit card usage and the cashless society does not look too far away.

But where there is money there is vested interest. The vested interest associated with electronic commerce has the brakes firmly locked on an otherwise accelerating technology. As is usually the case in the IT industry most of the brakes are being applied through the standard setting process. Here the vested interests scramble for competitive advantage with all the tact and persuasion of a "Yes Minister" episode.

In Australia, the Federal Government has entered the fray with an ambitious ultimatum to all of its suppliers. Worded more eloquently, the message is that unless you are prepared to do business via electronic commerce you will not get the Government's business. This is to be enforced sometime in 1997. This has the Government in a hurry to find a version of electronic commerce which can meet its requirements. Numerous EDI vendors are also in a rush to demonstrate a viable solution.

Meanwhile the banks are trying

to ensure that they remain a vital cog in the wheels of business when the mechanics become electrified. Having wired up the bank to the point that it now exists on the pavement, in shops and over the phone, the banks are now concerned that not only will the customers not enter the bank, but neither will the money. Credit card giants MasterCard and Visa are fuelling this concern by suggesting that they, rather than the banks, should be the

But where there is money there is vested interest

major interchange for electronic funds transactions. Bill Gates has ideas of his own, for which he has been taken to court.

What everyone is assuming is that the market wants electronic commerce. Knowing that nobody asked for automatic teller machines but nearly everyone uses them, market research is largely being regarded as irrelevant. But many of the electronic commerce solutions being offered are designed firstly to make money for the operator and secondly to function effectively.

A humble academic from Melbourne University is now being pushed onto the world stage. Ken Steel is a programmer by profession and a pragmatic man by nature. He has unravelled the complexities of the numerous electronic commerce

standards and created a program which will handle all forms of EDI. Steel's vision is to have this program embedded in any and every computer application which requires EDI functionality. The fact that this is a possibility is a major threat to a number of the vested interests. For while they are arguing over the portions, Steel may have taken the "electronic transaction fee" pie.

Thanks to Steel, electronic commerce is no longer a technical issue. It is a viable alternative to cash. The day is not far away when most accounting packages, on anything from a PC to a mainframe will be able to conduct electronic commerce. But before that day comes there are a number of very powerful organisations which will have to settle their differences. When it comes to money, trust is in short supply.

The market will not adopt electronic commerce while the high levels of confusion and uncertainty remain. That Steel makes it possible for the pie to disappear may have the vested interests happy to accept a smaller part of the pie, thereby releasing the brakes on electronic commerce.

When the day comes that electronic commerce is the default method of business transaction you can thank an Australian academic not only for the arrival of the day, but also for the fact that you, rather than the vested interests, are getting the majority of the pie.

- **Andrew Kent is manager, IT, at the Australian Society of CPAs**

Project management

The Business Handbook has come full circle, we have covered elements of preparation, acquisition, implementation and ongoing issues. Last time we looked at preparation we covered cost-benefit analysis. This time we examine project management

Project management should be firmly in place prior to the project starting. Part of the preparation stage is determining who will be responsible for what, and how they will communicate with everybody else.

Before you look around the office and dump the responsibility on the first hapless soul who captures your attention, it is a good idea to review the requirements of the job. Project management is an art not a science. There is no formula for success, no rules which cannot be broken.

There are three elements which need to be managed: the users, the technology and the available resources. All organisational issues are bundled in with the users; technical issues with the technology; and time, physical, financial, and human resources come under the broad heading of resources. The project manager needs to be able to control all of these, but particularly the users and the resources.

The users

If you are keen for a project to succeed then the first thing to do is make sure that the users understand the part they play in a project, and ensure that they stick to their role. The users' role is to set the objectives and control quality.

The best users also own the project. They understand what they want to achieve and what they expect the project to deliver. They let the project manager control the project, whilst ensuring that the project remains focused on the objective. They support the project politically and provide a clear and consistent framework for

those working on the project. They are very good for project morale, and their existence will underwrite many successful projects.

On the other hand, some users believe that, just as the customer is always right, the user is always right. Some even take it one step further, believing that the users have the right to change their minds at any time. Time taken at the outset to introduce these users to the reality of IT projects will save a lot of pain, frustration and money later in the project.

Managing the relationship

Most projects have a project manager. Those that don't are more of an experiment than a project. The relationship between the project manager and the users is critical to the success of the project. The relationship requires that the users have the ability to keep the project focused on their requirements while the project manager has control of the project. If this relationship is skewed then the project will suffer. The following are some examples:

The user is the project manager's line manager: Unfortunately, this is very common. A senior executive wants a new application put in and wants control over the project. So he puts one of his managers in charge.

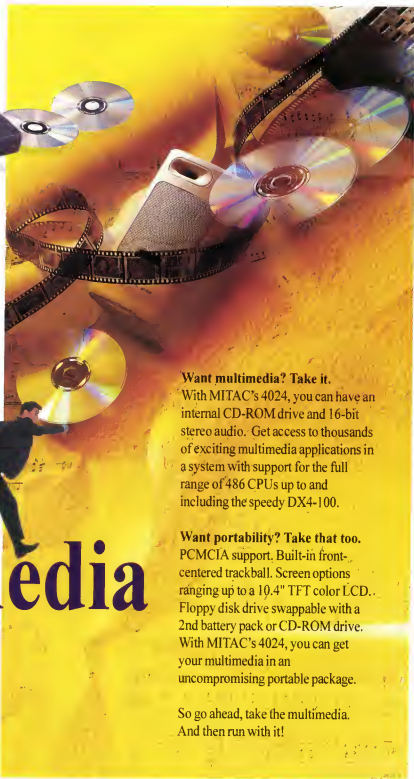
The key factor here is the desire for control over the project. A project cannot be managed if the project manager cannot control it. This type of relationship results in the senior executive undermining the project manager's authority with continual interference. It can also cause numerous and unnecessary changes to the user specification throughout the project.

A way to deal with this type of arrangement is to move through a number of prototypes in order to get a clear understanding of the senior executives' requirements. It is also a good idea to move the responsibility back to the real controller by trying to make the senior executive sign off on all of the consequences of his actions, eg, increased cost, late delivery, etc. ➤



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*This type of project manager believes
that the only way to do it properly
is to do it yourself*

The project manager is the user: This is also common. This type of project manager believes that the only way to do it properly is to do it yourself. The main problem with this approach is that you start off playing chess and end up playing draughts, but finish happy because you won. In other words, there is a very real danger that the process, ie the project, will become more important than the objective, which is to deliver the appropriate application.

A way to deal with this type of project management is to document the requirements and the project objectives very clearly, and then constantly refer to them as the project goes along. Unfortunately, this is rarely done when the project manager is the user as he usually considers it to be an unnecessary overhead.

There is no user: This is common in large organisations where an application or project spans a number of departments. This is the sort of project run by an old-fashioned MIS department. From their point of view the user specification dropped out of the sky and like other pieces of religious literature it is treated with great respect and a good deal of personal interpretation. The benefits of this sort of project are that it usually justifies the purchase of the latest technology and it tends to be delivered on time. The downside is that it may not do what the users wanted.

A way to deal with this type of project is to have a user representative or user manager on the project full-time. This person's job is to interpret the users' specification where it is vague or ambiguous. He or she should also communicate with the various users on the various decisions which have to be made throughout the project.

A mixed bag: In many circumstances the relationship between the project manager and the user will include

elements of all the scenarios outlined above. In large projects various elements may fall neatly into individual categories, but generally a project will be a mixed bag of these relationships.

Some people try to avoid these various relationships by appointing an external consultant as a project manager. The relationship between an external project manager and the user will be reflected by the amount of internal authority he has been given and who is paying his cheque. But generally his situation will not differ greatly from that of an internal project manager with similar project management experience in the same position.

The technology

Effective management of the technology is relatively simple. At the end of the day it either works or it does not. What is required from the project manager is high-level understanding of the technical issues involved and faith in the technical staff. The project manager should not be prone to panic, and readily accept that the technology may not work as expected until five minutes before it absolutely has to. The key issue here is that whether the technology works has almost nothing to do with the project manager.

The resources

The management of project resources will occupy most of the project manager's time. While there is a definite art to managing project resources, there are also a number of software tools like Microsoft Project which can make the task a lot easier.

Time: Time is the project manager's nemesis. Just about every project starts out with a time schedule that will only work if everything goes to plan. And as no project ever goes exactly to plan, the main job of the project manager is to distort the time/reality matrix just enough to get the project finished before the deadline. A key element of this is to get the gifted members of the project team to work 18 hours a day when they were originally scheduled to work eight, all on the vague promise that the time will be made up to them at some later date.

Physical resources: The physical resources of a project include office

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space, the delivery of equipment, travel arrangements and other items commonly associated with logistics management. One of the key restrictions here is that there is usually no budget or prior thought given to this aspect. The net result is that the project manager usually has to make all these arrangements by personal persuasion. **Financial resources:** Depending on the amount of flexibility built into the cost-benefit analysis this can either be the cure-all or pitfall of the project. An over-funded project can buy its way out of trouble, an under-funded project will bury itself in cut corners and compromises. The project manager can quickly turn any project into an under-funded one by trying to buy inappropriate solutions. A project manager with good negotiation skills may be able to save a project by obtaining extra funding as required. Either way it helps if the project manager can write a good budget and manage the financials.

Human resources: A degree in psychology would not go astray. Failing that, the project manager should at least be adept at getting the best out of people. IT staff, users and contractors are not known for their understanding of others. The project manager will be called in to police inter-group riots, interpret misunderstandings, generate co-operation and provide liberal doses of sympathy; and at the same time will push people to work harder, smarter and faster. The other aspect of managing the human resource is actually getting people to participate in the project when they are needed. The majority of the human resource may not be on the project full-time, and getting them to give priority to the project over other work may not be easy. At the end of the day the project manager must be able to accept outright hatred as part of the job.

So having read this and decided that you do not want to be the project manager, and knowing the various pitfalls of an inappropriate selection, it is time to select your project manager. I wish you luck. Good project managers are paid good money for a very good reason.

— ASCPA Staff

Finding food on the Net

Q: I am setting up a small restaurant, and a friend of mine who is into computers suggested that I promote it via an Internet home page. Is this a good idea, and how would it work?

— Janet Browning

A: When looking at the Internet or other on-line services as a means of promotion it is a good idea to consider who your target market is. Obviously those Internet users in other countries or other States are not going to become regular customers simply because you have published your daily specials on-line.

Another thing to remember is that the Internet is harder to navigate than the Amazon basin. The only way that anyone will ever find your home page (ie, the place where your promotion resides) is either by a keyword search or via a link from another World Wide Web page. There are a number of central index pages on the Internet which are like universal road signs. If you are going to have a presence on the Internet then having a presence on these will dramatically increase the chances of someone finding you. However, the Internet relies on the user making the decisions, ie

pro-actively looking for something. Do you think that your potential customers are likely to plough through the Internet in an active search for a good place to eat?

Q: Our supplier is telling us that spreadsheets are now commonly used for the production of financial reports. But I have heard that spreadsheets are frequently unreliable and error-ridden. Which statement is true?

— Beverley Greenwood

A: Both statements are true. Research has shown that approximately 70 per cent of spreadsheets contain at least one error, usually in the formulas. At the same time the ability to extract data from a financial system and combine it with the flexibility of a spreadsheet has resulted in a large number of companies generating their financial management reports via this method. This combination is obviously cause for concern; however, most of these reports are generated automatically once a standard set of spreadsheets and macros have been created. If you are aware of the danger then you can audit these very carefully prior to their imple-

mentation to ensure that they do not contain any errors.

Q: What is the best financial software package available in Australia?

— Keith Owens

A: This is a question we are frequently asked, usually by someone trying to decide what to implement. It is a question which generates more questions than answers. It is a bit like asking what is the best day of the year — it depends entirely on what you want to do with it. Our standard answer is that there are over 300 financial software packages available in Australia; the vast majority of them are listed and indexed in an annual publication put out by the Australian Society of CPAs titled *Accounting Software in Australia*; take a look at it and decide which is the best one for you.

— ASPCA Staff

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Price cutting has no long term benefits for end-users

During the past decade the computer industry in Australia has been characterised by technological change, falling prices and failing companies. As I write this article, the jury is still out on the future of Osborne, the latest casualty in the race for a market share by the industry's giants.

The industry doesn't seem likely to ever rid itself of the boy wonder image as can be demonstrated by the demise of companies like Parity, Amicron, Norfolk Data, Solutions Plus and HiSoft. With the failure of so many corporations you have to question what the industry is doing wrong.

Since the early 'eighties the industry's PC based marketing policy appears to have been based on one thing only — market share. It could be argued that the consumer has been the winner from this policy due to falling prices resulting from fierce competition. But is price everything?

In the early years manufacturers did little to educate the market. The term "box-moving" was common in describing many of those organisations dealing directly with the consumer. Solutions selling in the PC area didn't emerge as a marketing tool until early in the 'nineties. Almost any dealer could obtain distribution rights of a product provided he offered the magic "100 units" as an inducement. These same dealers were pushed by the major players to increase their sales and thus the supplier's market share. Little consideration was given to the end-user's needs or requirements, most of whom were first time users.

I have known Stan Falinski for

many years and have always liked and admired him. I bought my first AT computer from him when he was operating out of York Street, Sydney. He was always passionate about his product and took a personal interest in users. His objective was to put computers within the reach of everyone. Since then, his company has grown to become a dominant force throughout Australia. You would be lucky to find anyone in this country who doesn't know the name Osborne and considers it the equal of many overseas giants.

As Osborne's fortunes grew, many competitors were forced to rethink their pricing policies to prevent Osborne entering their traditional markets. This started a price cutting policy from which the only winner appeared to be the end-users. But were they?

If the race for market share results in the demise of companies such as Osborne how does this affect end-users? Could it lead to a market dominated by a few global companies as some suggest? How would this affect prices? It would most certainly lead to an increase in the long term. A price increase that brings positive additional benefits to the end-user is not only acceptable, it should be encouraged. Anything more than this is not.

As the result of this ongoing price competition, margins have been decimated at all levels. Is this in the long term interests of end-users? Hardly. While prices of computers have continued to fall so have dealer margins. On some notable brands these margins are as low as 6 per cent gross. Can these dealers honestly believe

they can provide sustainable customer service on these meagre returns? The justification for such margins is once again based on turnover and certainly not customer service!

It is clear that current pricing policies are inadequate. Those who claim pricing based on US experience should remember the difference in population size between Australia and the US. In most comparisons of major products between our countries this factor of economy to scale results in considerable price disparities.

If build quality is sacrificed at the expense of consumer prices, how does this benefit the consumer? What good is a warranty if there is no-one around to honour it? What value is a market share without longevity?

It seems to me that the industry needs to take a hard look at itself. It must be realised that the only successful expansion is one based on consumer confidence and customer satisfaction.

As for Osborne, I believe the best result would be for it to continue. That is, provided it learns from its experience and considers a market share a bonus rather than the major objective. I wish Stan Falinski all the best in the coming weeks, as many have come to depend on Osborne in one way or another.

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WHAT, no centrefold?

This month, some
history, some games
and a bit of gee whiz

By Jan Wikström

The first Playboy Interview was pretty widely perceived as an attempt to provide readers with a highbrow excuse for reading what was, by the standards of the US in the early sixties, a porn rag. Both perceptions changed. *Playboy* went from hard-core to soft-core to pink marshmallow; the Interview went from provocative to thought-provoking to the sort of institution celebrities fight to get on — second only to the cover of *Time*.

The Playboy CD spinning happily in the triple-speed CD reader kindly lent to me by NEC (my old single-speed can't read this format) is a complete collection of the first 30 years of the Playboy Interview —

all 352 of them, plus some wrap-up material, consisting of a brace of video clips from the launch of the collection, an interview with the interviewers, and snippets of the raw tape of some interviews.

The software is good enough as far as handling the material is concerned. There's a basic presentation format with photos of the "victims", arranged either chronologically or alphabetically, and you open an interview by clicking a photo. There's a similar arrangement for accessing the sound clips.

There's also a search engine of the customary database type; you can enter search strings that use AND, OR and NOT, and you can search for ►

PLAYBOY INTERVIEW:

PAUL HOGAN

*a fair dinkum conversation with
the wonder from down under
about aussie women, beer, blokes
--and the phenomenal success
of "Crocodile Dundee"*

PREVIOUS

NEXT

READ
INTRODUCTION

Q&A

by David Rensin, July 1988

If it hadn't been like that. Full of pretenders and would-bes. But people don't do deals around the pool of a hotel. That's only in the movies.

PLAYBOY: Was it tough for you to cut through the bullshit in Hollywood?

HOGAN: No, not when I was talkin' to blokes who were genuinely in the business, who knew what it's really all about and could say yes to a deal. Then, no problem at all. It's a pleasure, in fact I can understand, though, that it'd be a tough business to be here with your script under your arm, waitin' in those queues, fightin' to connect with somebody's secretary. I wouldn't play in that game.

PLAYBOY: Did you have any sort of film model on which to fashion "Crocodile Dundee"?

HOGAN: I had models of what to avoid. I wanted nothing in my film where the

Exit 2

14 of 66

The Playboy Interview CD presents the interviews in much the same format as the magazine. The functions of the various buttons can be puzzled out in spite of the aver-artistic decorations, and the interface is easy to navigate — but give it plenty of time

literal phrases. The search result is presented in a separate window, which has the drawback that the main window showing the current interview is deprived of space, but the advantage that you can search for contrasts and similarities in other interviews without closing the one you're currently studying. This is quite a powerful research tool if you're really studying the interviews, instead of just reading them.

Where the software is not good enough is in the speed of going from one interview to another, or one feature to another — it makes your average garden snail look like an aerobics freak.

This is definitely one you buy for the contents and not the presentation. Well, maybe some of the content is of limited interest, unless you're fascinated by American jazz musicians and sports stars, but there's an absolute treasure of insights into important historical figures and, of course, international celebrities. As well as Patti Hearst (remember the Symbionese Liberation Army?), and that murderer, what's-his-name, who insisted on getting the death penalty.

Yes, there's a certain freak show element, but even the freak show interviews are good interviews. As a journalist, I have to say I admire the people who conducted and edited these penetrating, insightful interviews. And if you know what a pedantic grouch I am, that's saying a mouthful.

What really freaked me out, though, are the handful of before-and-after pairs of interviews. Castro the well-meaning young revolutionary makes a fascinating contrast with Castro the sagging, disappointed dictator.

This is a large slab of living history and a document of our time that repays careful study.

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Sweat, grunts and laughs

AFL 95 — Multimedia Football is a very pleasing local product. By this, I mean not only that it's pleasing to see a good local product, but also that the product itself pleases. I found the software witty, clever and funny, as well as innovative. One very clever idea, for example: as the cursor crosses each button on the main screen, a new icon appears.

The Teams button shows a different shield each time the cursor enters it, the Players button shows a different player, and so on. The one I really liked is the Halftime button: it shows a meat pie, and every time the cursor crosses, there's another bite out of it.

The program is unusual in that it's intended to run under 65,000 colours. It will run in other colour settings, although there may be some unusual colour effects due to palette mixups. At least it won't refuse outright.

Once in operation, the program works just fine and is not as slow as I expected from a ToolBook application — it appears that version 3.0a has been considerably improved. The package includes a runtime copy of

This is one of the action clips in AFL 95. Note the dimmed-out control buttons at top-left and bottom-left — they become clear as the cursor enters that area. This is a nice touch because it preserves functionality while reducing distractions from the main image

Video for Windows 1.1d, which is the latest version.

The presentation is multimedia-rich, with many video clips of match highlights. The image size is large, so you need at least a dual-speed CD reader for smooth viewing, even under Windows 95. I found AFL 95 to work well both as entertainment and as a reference source, with painfully detailed statistics of clubs, players and matches, including the full 1995 program. It's a pity I didn't get hold of this one a couple of months earlier, but maybe next year... The statistics tables are well laid out and have another nice feature: click on the abbreviated column heading and not only do you get an expanded version of the heading, you also get the table re-sorted on that column.

As a special treat for those who

are more knowledgeable about Aussie Rules than your humble and obedient servant, there are two trivia games — one a chocolate-wheel type and one a sliding-tile type. I particularly liked the sliding-tile game: first, you answer enough questions to get eight correct answers (each turns a tile picture over). You then slide the tiles around to form a composite picture — which then starts moving because it's a frame out of a video. Neatly done!

AFL 95 — Multimedia Football

Price: \$79.95

Dataflow
Phone: (02) 310 2020

Jambo, bwana

There are times when reviewing is just a job, and there are times when it's a privilege. Coming on top of the entertaining AFL CD, Medio's Safari, created by Alpenglow with the great wildlife photographer and author Jonathan Scott, has made my day.

I found it a tasteful and elegant

presentation with great features — and a work of lyrical beauty, infused with Scott's love for the African nature and wildlife. He's well-qualified to describe Kenya's Masai Mara, having lived and worked there for most of his 20 years in Africa, and he has the talent to do it passing well.

The Masai Mara National Reserve and Serengeti National Park form a continuous habitat sequence across the Kenya-Tanzania border. Its rich wildness, as captured in this CD, is stunning. Here is harsh, uncaring nature, truly red in tooth and claw, balancing teeming death and a prodigious abundance of birth and rebirth, in the process creating unending beauty.

Forgive me for going all soggy, but here are images to put a lump in your throat and make you wish humanity could grow up and learn to embrace and cherish nature. I promise Safari will give you the same joyous pain, if you have an ounce of poetry in your soul.

But let's hit the prosaic side of the tracks. The subject — as you may have gathered — is the wildlife and landscape in the Masai Mara and the Serengeti National Park, although the section on the Serengeti is little more than a footnote. This is not a slight to

Tanzania; it merely reflects the fact that the Serengeti is mostly plains and the Masai Mara is where the permanent water and rich scenery are. The animals migrate back and forth across the two, driven by the imperatives of survival.

On safari

The material is arranged to let you approach it as a passive or interactive viewer. Counting the introduction, there are 12 guided tours (narrated slideshows) covering different animals and aspects of life. All are duplicated in illustrated semi-hypertext form, with more material added, under the name Field Guides, which is useful when you want more detail.

Other Field Guides are encyclopaedia pages, again with hypertext links to related pages, which can be printed out. They are a fine reference source of all warm-blooded ground-living animals of the area, and a large selection of birds. There's an omission here; not that I'm feeling critical, but I do think a selection of snakes, amphibians and the more spectacular insects would round out the picture of a fascinating region.

While I'm being picky, there's an organisational bloop. In the narrative, Scott refers repeatedly to an "African Stories" section — but there is no such section. To find the stories concerned, you have to know that you go to Field Guides, ignore the animal browser buttons, and then click a little grey button marked "Stories". But that's the only flaw I found in the program, and I'm chiefly mentioning it to help you out when you use your own copy.

Clearly a man who wishes to spread the message rather than ▷



Not your average main screen. The usual arrangement has buttons positioned in Control Panel fashion, but there's no reason why they shouldn't be arranged as part of the composition and emphasise the main image, as here

monopolise the market, Scott has included a brief nature photography course, which contains some excellent advice for beginners.

There is the usual viewing gallery of individual pictures, videos and sounds, which contains a very pleasing slideshow without narration but with music by the group D'Cuckoo, which plays better than the illiterate name would indicate.

What really turned me on, though, is the On Safari browsing function. It's marvellously suited to the spirit and nature of the material, and does let you use the mouse to wander about the landscape and discover what there is to see, true safari fashion.

The way it works is that you get a map of the Masai Mara with "special locations" marked in red. To place this map in context, you can use a set of map buttons to zoom out to "all Africa", and back in stages again to the close-up map. When your mouse travels to one of the red dots, a red ring appears; a click then opens a narrated view of the landscape at that spot.

Moving the mouse across the view causes light rectangles to appear; clicking on one of those opens a close-up of an animal that would be found in that spot. For further "drilling down", the close-up has a button that opens the encyclopaedia page for that animal. Many such pages include video clips, by the way. There are also red rectangles, which take you to another special location without going back to the map, creating a great sense of roaming about the landscape.

This way of snooping about the bush appeals immensely to me — maybe because of our human hunting/exploring heritage, maybe just because I'm nosy. I hope it will appeal equally to you. I recommend Safari most warmly as both an experience and a reference source.

Safari

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Cack-handed music

In cricket terms, *An Introduction to Classical Music*, by the English firm Attica Cybernetics, is a dropped catch. It has all the elements of a little browsing sampler that might do something to get a curious novice interested, but it's been put together with masterful incompetence. Worse, there's no visible enthusiasm for the subject.

There is no overall presentation of the kind beginners should be given, just a narrated historical explanation that is oversimplified and inaccurate to the point that it would flunk as a Year 8 school essay.

There is a good set of music (209 snippets) and composers, accompanied by superficial descriptions in sloppy English. You can move with fair ease from music to composer to description and to a new one of either, but the controls are wildly counter-intuitive. For example, going from the music-playing mode to the selection mode you click a key labelled D.C. Select; to get back from the selection mode to the music-playing mode, you click not the Play button but the same button again. And if you want to see information about the composer you click the Goto button, which sometimes works in mysterious ways;

This screen from An Introduction to Classical Music is typical. Note the tacky-looking custom buttons and arrows, and the superficial, slangy and insensitive text

once, I clicked it while listening to a Debussy composition and got a biography of Vivaldi (while Debussy kept playing).

As to what D.C. stands for, I could find no explanation; the Help button gets you a narrated slideshow but no index. Yes, folks, there's no Windows help. The product bears all the hallmarks of a DOS item that has been converted to Windows in the wrong way. It uses very DOS-looking customised controls, instead of the standard Windows ones, and it doesn't report its presence to Program Manager correctly (it failed to show-up on my Win95 taskbar).

Stay clear of this turkey. ■

An Introduction to Classical Music

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MULTIMEDIA SOLUTIONS

Portable CD player

Panasonic has announced the availability of a portable double-speed CD-ROM player. It connects to either a notebook or desktop computer.

Called the KXL-D720, the player features a power saver mode that puts the player into "sleep mode" after four minutes of inactivity. It

supports CD formats including CD DA and Photo CD Multisession and can also play audio CDs with optional headphones.

The player connects to a notebook through a PCMCIA Type II card or to a desktop via a SCSI-2 interface.

It has a transfer rate of 300Kbit/sec and is powered by six AA batteries or an AC adaptor.

Weighing 390g the KXL-D720 portable CD-ROM player sells for \$699.

Panasonic
Phone: 132 600



Six-disk CD-ROM changer

Pioneer has added to its range of quadraspin drives with the release of the six-disk desktop DRM-624X. Designed for users who need to access up to 4Gb of CD-ROM removable data in one box, it offers access speeds of 110ms, and a transfer rate of 676Kbit/sec.

It incorporates the Pioneer magazine that holds up to six CDs allowing users to access a multidisc database without manual disc switching or command routines.

The DRM-624X features stutter-free audio playback of audio CDs, and ships with a SCSI-2 interface, a 12-month warranty and driver software for DOS, Windows and Mac.

Pioneer Electronics Australia
Phone: (03) 9586 6300

Page layout software

PageMaker 6.0 is a major upgrade of Adobe's professional page composition software. It offers a range of features that emphasises colour publishing, and gives users flexible page design and printing and prepress controls.

The program also lets users create publications in Adobe's Portable Document Format (PDF) and authoring Hypertext Markup Language documents for publishing on the World Wide Web.

It is aimed at a range of users including high-end publishing professionals, graphic designers, small office home office users and commercial printers.

Colour features of the program include the Kodak Precision Colour Management System (CMS), complete PhotoCD support with auto-sharpening capabilities, RGB to CMYK TIFF conversion and expanded Pantone colour libraries.

Kodak's Precision Colour Management System helps users maintain consistent colour from scanning to on-screen manipulation, proofing and final output.

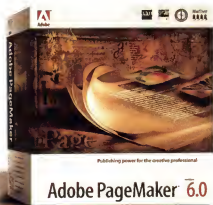
Page layout features include multiple master pages, grouping and ungrouping, a Table Editor, position locking and unlocking of elements, polygon drawing, a zoom tool, the ability to mask text and graphics, automatic alignment and distribution of objects, user-definable grids, automatic kerning and the ability to move selected elements forwards and backwards.

Printing and prepress features include integrated automatic colour trapping with trapping controls such as the ability to specify trap width, trapping thresholds, black attributes, and the ability to auto-overprint black text, lines and fills.

The program is available on floppy disk as well as CD-ROM. The CD version contains technical information and a range of software. Software includes the Adobe Acrobat Distiller and Reader, and Kodak Photo CD images.

PageMaker 6.0 sells for \$1,295. Upgrades are available for \$295.

Adobe Systems
Phone: (02) 418 8488 ■



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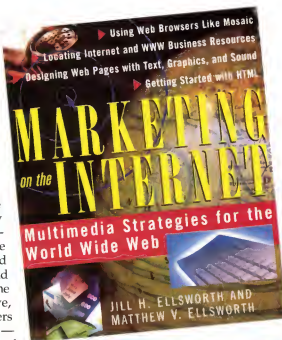
All things to all NET heads

It's becoming a tad hackneyed by now to note that the Internet is like another culture, with its own language, customs, etcetera. However, when it comes to the topic of doing business on the Internet, in particular through advertising, then it is relevant to point out that many Net users regard such activities as incompatible with the culture of the Net, which has until now been spared direct advertising through its Acceptable Use Policies. But while old net surfers are trying to avoid being swamped by the incoming commercial wave, the would-be Net marketers are jostling for position — hence the growing band of books showing you how to do business on the Net. If *Marketing on the Internet: Multimedia Strategies for the World Wide Web* is anything to go by, then expect lots of noise with little substance — culture shock for some.

The title of the book, while convoluted, is actually quite revealing: how can we resist not one, not two, but three current buzz phrases? We've got the latest, sure-fire, how-can-you-afford-not-to-do-it "marketing on the Internet", combined with yesterday's fad (but still a winner today) "multimedia strategies", all wrapped up with the darling of the moment, the "World Wide Web". Phewy!

If that sounds like trying to stick a finger in every pie, the book itself confirms such an approach, passing itself off as an introductory reference for getting onto the Net, a World Wide Web reference, a technical manual for authoring Web pages, as well

A book about the Internet cannot hope to cover everything — but some do a better job than others



as a marketing textbook and a business handbook, among other things.

Unfortunately, it doesn't really give anything more than an overview of any one area. Who is it aimed at? According to the book, businesses with no Net experience, businesses with Net experience, non-profit groups and individuals interested in the World Wide Web "for any reason". So far we've got a manual that promises a lot to a lot of people, who, incidentally, are not going to get much — a cynic might say "well, that's marketing".

Don't worry

Early on we're introduced to some of the technical terms that need to be covered to successfully use the Web, one of which is a URL. Under the sub-heading of "What is a URL?" we're told that if "you don't know what a URL is yet, don't worry". Hey, it's covered somewhere in the book —

they don't reveal a page number or even explain the acronym (Universal Resource Locator), but it is there somewhere.

Later on it's revealed that it's a "remarkable thing" and "in one sense, why businesses can join the Internet so easily", before finally revealing its true purpose as a standardised addressing system used for retrieving information.

The "don't worry" approach can be seen in action elsewhere. Under the subheading "The World Wide Web — Excellent for Marketing and Sales", we're told that the information used goes beyond text: "it can be any mix of full-colour



pictures, movies and sound". We're not told that a great many users don't have the equipment to get onto the Web (which requires a fast PC, bucket-loads of memory and the latest modem), never mind that you can go to lunch in the time it takes moderately complex graphics to display, and that most people (and businesses) don't have the time, expertise or equipment to bother downloading minuscule portions of a bad-resolution movie that occupies a small square on their screen.

But, hey, don't worry.

There's also not much background information on the traditional Net population's resistance to advertising, even though there's a chapter that supposedly covers, among other things, "Customs of the Natives" towards the end of the book. I would have thought such information was important early on.

If you seriously want to use the Internet as a marketing tool, you'd be well advised to spend some time getting acquainted with it first; start by buying a good beginner's reference, such as *Zen and the Art of the Internet* (Prentice Hall) or *The Australian Internet Book* (Woodslane Press) — reviewed in the October 1994 and May 1995 issues of *PC World*, respectively). Then decide if the Internet is suitable for you; if it is you'd most likely gain the services of one of the technical-design companies that specialise in putting information on the Web.

As for this book, it will need more than marketing can offer.

Secret service

In contrast to the previous offering, *Internet Secrets* is a book that also has a wide agenda yet manages to cover its subjects thoroughly. Built like a metropolitan telephone book, *Internet Secrets* is a collection of essays/tutorials from over 40 authors around the world that covers the social-cultural aspects of the Internet, as well as delving into technical matters such as security, creating Web pages, becoming a service provider, and tips and techniques that cover a range of Internet tools and destinations.

It even covers the vexed question of doing business on the Net, with

some important advice on what not to do.

What separates *Internet Secrets* from *Marketing on the Internet* is the depth with which it tackles a subject; the expertise that the authors bring to their subjects; and the fact that it is squarely aimed at intermediate to advanced users (that is, someone who has been exposed to the Net but wants to know more).

The book's editors — John Levine and Carol Baroudi, co-authors of *The Internet for Dummies* — see their primary audience as "the avid Internet user — someone who uses the Net and is dying to find out more and better ways, places, programs and lore".

They suggest that there is not an Internet user out there who knows all the secrets they've uncovered, and in my case I'd have to agree after picking up tidbits in most sections, especially those on security and becoming a service provider (which I certainly have no intention of doing but it was interesting reading anyway). There is also a useful reference on the various Winsock applications that you can run on your PC to connect to the Internet, with details on where to find them.

A couple of disks that come with the book provide utilities for decompressing files, a complete listing of the mailing lists to which you can subscribe, and scripts for use with Network News (newsgroups) and WAIS. While these are a nice bonus the book can easily stand on its own (literally), and is a worthwhile buy for any enthusiastic Net user.

— Geoff Long

Net books

Marketing on the Internet

By Jill Ellsworth
and Matthew Ellsworth
Jacaranda Wiley
ISBN 0 47111 850 8
\$49.95

Internet Secrets

Edited by John Levine
and Carol Baroudi
IDG Books
ISBN 1 56884 452 0
\$79.95

New Internet service providers

Alexia Internet Services states its "sole purpose is to keep the Internet affordable". Personal accounts are \$220 per year for full SLIP/PPP access for three hours per day (no hidden fees for FTP, e-mail, news or IRC). Business accounts are \$500 per year for two hours per day, or \$650 per year for three hours per day. Home Web pages are extra. Contact Alexia at alexia@alexia.access.net.au or <http://alexia.access.net.au/> or phone (039) 883 4182.

Northern Tasmanians can log on to the Internet through Vision Internet Services, operating out of Launceston. Services are the same as those provided by Carinthian Internet Services, who are providing Vision's main Net feed. Costs include a \$75 registration fee, \$6-\$8 per hour on-line charges, and no download charges. Contact Vision on (003) 44 4432 or info@vision.net.au.

World Reach is offering Internet access to companies and individuals, and a Web page service. The standard on-line service includes e-mail, WWW, FTP, news and IRC, starting at \$30 per month. Charges are based on traffic volume, not direct time costs. Reach World Reach at info@wr.com.au or <http://www.wr.com.au/> or phone (02) 436 3588.

Australian Netlink sells Internet access, programming, consultancy, and other Net-related services. It has a range of pricing options for private and corporate users, using dial-up, semi-permanent or permanent connections. Phone Australian Netlink on (03) 9690 0660 or browse to <http://netlink.com.au/>

New version of Chameleon

NetManage is shipping an upgrade to its Chameleon TCP/IP Windows application suite, which includes 18 applications. Version 4.5 contains Internet mail, Gopher, NEWTNews news reader, Archie, FTP, Telnet, WebSurfer WWW browser, and more. New applications are the customisable ECCO Internet Address Book, which lists over 2,000 Internet sites, and Talk for real-time conversations at ISDN speeds up to 128Kbit/sec.

NEWTShooter integrates all the applications and allows information sharing between them. The upgrade

Needles in the SERVER HAYSTACK

*Searching for a file?
CompuServe will get it,
almost automatically*

The difference between CompuServe and the World Wide Web is never more apparent than when you want something specific.

The World Wide Web is a browser — you find one place, follow a link, and gradually drift from marvel to marvel, letting your attention be diverted by whatever strikes your eye. It's a great, big coffee-table book in cyberspace, gorgeous and distracting, but with a scrappy index and no guarantees for the researcher. Serious researchers can use the World Wide Web because they're prepared to track what they want down endless blind alleys, but if you don't want to make a career of it, the Web can be frustrating.

As a browser, CompuServe doesn't rate. There are no links from one place in CompuServe to another. When you're in a forum, you're in it, and you have to deliberately leave before you can go to another.

CompuServe won't let you drift. It's regimented and highly structured. However, if you *want* something, CompuServe is the place to go.

I wanted a hexadecimal editor. One of the big omissions from Windows, and now from Windows 95, is a universal viewer. You can associate a particular file extension with a particular application, but there's no default viewer for files with no association.

It would be great if you could double-click on any file and know that if the file had no association, you'd see it in a hex viewer. There's always something you can tell from looking inside a file, and a decent hex viewer shows you both the bytes in a file and the text, side by side. In Windows 3.1, even if you have a decent hex viewer you have to do something complicated to view a file. Either you drag and drop the file into the open viewer, or you open the file explicitly

from the viewer menu. In Windows 95 there is still no default viewer but there's a very handy Send To feature. You can select a file in the file browser, choose *File-Send To* from the menu, and then select a destination from a range including your floppy disk, the Windows fax, and so on.

The destinations that appear in the list are just the files in the \windows\sendto directory, and you can put a text editor and a hex editor in there if you like. This lets you set up a universal viewer with just a few more mouse strokes than if there were a default file association.

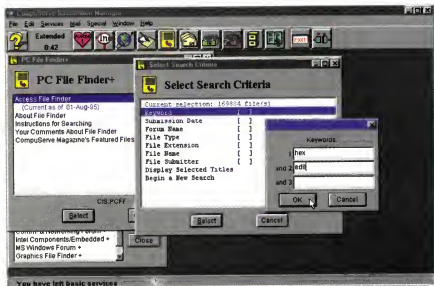
So with this discovery my dream of a universal viewer was close to fulfillment. All I needed was a hex viewer or editor. In CompuServe this is absolutely no problem.

Switching to Auto Pilot

First, to make the file retrieval easier, turn on Auto Pilot if you haven't already done so. This is just a matter of adding the line "Auto-Pilot=On" to the *wincim.ini* file in the "General Preferences" section. The *wincim.ini* file is probably in your \cserve\wincim directory.

Second, you just open WinCim and choose Go from the Services menu, or press <Ctrl>+<G>. Type in the service name for the PC File Finder: **PCFF**. WinCim logs you on to CompuServe, and after some huffing and puffing displays the archaic interface to the File Finder. Double-click on *Keyword*, and enter **hex** as one keyword and **edit** as another.

Back in the US, or wherever the File Finder server is situated, there's some disk whirring, but all you see is that little hourglass pointer that floats in the dreams of all Windows users. Finally, the dull old File Finder interface comes back with a count of the number of files it has found, ▶



Enter the keywords you want to search for, and the File Finder assembles a list of files that match

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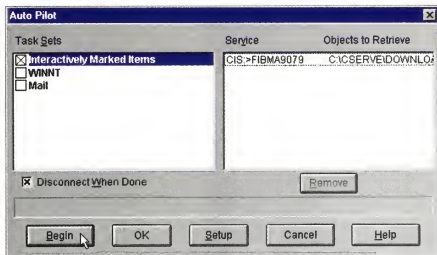
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Use Auto Pilot to go and get the files you've marked for later retrieval

displayed at the top of the File Finder window as "Current Selection". You just double-click on *Display Selected Titles* to see a window listing the files discovered all over CompuServe that match your keywords.

It's surprising how easy it is to zero in. The titles I found with those keywords were all hex editors. All I had to do was try to guess which ones were more suitable. When you double-click on a title in the list, up pops the description window for that title, which can give you a better idea.

You can retrieve straight away, but that's unpleasant because WinCim isn't much for downloading in the background. It tends to force you to sit and watch the little gauge ticking off the bytes as it downloads. It's better to check *Mark for later retrieval*. A window pops up asking you to select the location and file name under which you want to save the file on your disk when it is retrieved, and then you can go back to selecting more files or doing other CompuServe stuff.

Now you just choose *Special-Auto Pilot* from the menu. In the Auto Pilot window there should be a list of all the objects you marked for retrieval during your session. Check *Interactively Marked Items* and *Disconnect When Done*, then click *Begin*.

WinCim Auto Pilot automatically retrieves the files. It doesn't stay in the

background as well as it should, even in Windows 95, such that if you try to work in a word processor or any other application while you download files, WinCim has an infuriating habit of switching you back to WinCim at the conclusion of every file download.

You may also find that using another application confuses WinCim and causes it to make a download error. It may be best to just go and get a cup of coffee, and blame CompuServe if you start to suffer from caffeine shakes.

Eureka!

Which hex editor did I get out of all that? There's a very nice one from a German company called Aris, available in 16-bit and 32-bit versions. It handles multiple documents, has a nice interface and works in the Windows 95 Send To application I intended it for. Hex32.zip was the name under which I found the 32-bit version.

There were plenty of others there, as well. File Finder found 121 files, and probably 80 of those were hex editors for DOS and Windows. CompuServe does it again, in its inimitable, efficient, regimented and crusty old way.

• Neale Morison can be reached by e-mail on CompuServe 100250,113

also offers a Personal Web Server — complete software for setting up a home page on the Internet that does not require Unix experience to install and maintain. Chomeleon 4.5 lists for \$199. Chomeleon is distributed by Open Systems, phone (06) 239 7533.

Director integrated with Navigator

Macromedia will supply an integrated multimedia player in the next release of Netscape's Navigator Web browser. The integrated player, codenamed Shockwave, will permit on-the-fly viewing of multimedia titles through Navigator. The player software will also be available with every copy of Director, according to a spokesperson for Macromedia.

IBM Network grows

The multiprotocol IBM Global Network is expanding Internet access from 200 cities in 26 countries to 450 locations in 40 countries by year-end. IBM is also increasing dial-up bandwidth from 14.4Kbit/sec to 28.5Kbit/sec, and ISDN Basic Rate Interface speeds.

Local lingo

Fujitsu Austrolio has launched NIFTY-Serve, a Japanese language on-line information service based on the CompuServe format. It provides e-mail, voice mail, forums, news and weather (including the Moinichi, Asahi and Yomiuri news services), entertainment and shopping. Fujitsu Austrolio provides toll-free phone support in Japanese and English. Contact Fujitsu Austrolio on (02) 410 4555 for more information.

Net transactions

US companies Checkfree and CyberCosh are working to enable secure payments over the Internet within the next few months. Checkfree has announced that it will license technology from CyberCosh to integrate CyberCosh's security and cash transaction capabilities into the Checkfree Wallet software.

This will allow users to purchase goods and services from on-line merchants — the combined technologies will allow merchants to accept real-time payments from on-line consumers, regardless of the server or browser they are using, the companies said.

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Hunting for hidden wisdom

Q Do you know if there's some easy way to find Internet FAQs? I'm tired of hunting for them in each Usenet newsgroup.

— Peter McGaffrey

A FAQs, or frequently asked questions, are files containing answers to questions that Internet newsgroup users tend to ask over and over. Thousands of FAQs circulate through the Internet, covering every conceivable topic — from how to restore a blasted credit record to reviews of French restaurants around the world. Computers are the most common topic. FAQs offer some of the best consumer advice, computer advice and all-round life advice you'll find anywhere.

Most Usenet FAQs are posted regularly in the `news.answers` newsgroup. If you have access to the World Wide Web, you can connect to <http://www.cis.ohio-state.edu/hypertext/faq/usenet/FAQ-List.html>. Once there, you can search the Usenet newsgroup list and download the FAQs you want, all with a few clicks of your mouse.

But perhaps the easiest way to look for FAQs (especially if your Internet access is limited) is to send an e-mail message to mail-server@rtfm.mit.edu. Leave the subject blank, and type the line `send usenet/news.answers/index` followed by the line `help`. The computer sends you an index of the FAQs available on Usenet, as well as a file explaining how you can request them.

But Usenet is only the beginning — there are even more FAQs associated with Internet mailing lists (subject-specific conferences conducted via e-mail). For example, while doing some research for a book, I located five FAQs on the subject through Usenet, and 58 more through mailing lists. Moreover, I found that the mailing list FAQs were generally more valuable than those from Usenet. To find these "hidden" FAQs, you need to first scout for mailing lists on the subject you're interested in. Although you don't always need to be a mailing list member to request FAQs, it's easiest if you subscribe first, because you'll receive an e-mail message from the mail server that tells you if any FAQs are available and how to get them.

Making your modem reliable

Q When I was installing ProComm Plus for Windows, it asked if I wanted to install autoreliable, reliable or MNP mode. I had no idea how to respond. What do these terms mean, and which should I use?

— John Gerald Nitschke

A Your modem offers three flavours of data compression and error correction. In autoreliable mode, it first tries to establish a V.42/V.42bis connection. If that fails, it tries to connect with slower MNP protocols, and if that doesn't work, it connects with no correction or compression.

Autoreliable offers the best connection and is the most likely to connect successfully with other modems. Reliable mode varies by modem: some will attempt an MNP connection and hang up if that doesn't work; others insist on a V.42/V.42bis connection. MNP mode probably means ProComm will try various MNP levels and then, if those fail, establish a non-error-correcting link. For the definitive answer, check your manual.

Quick steps to creating your own Web page

Q I've been cruising the World Wide Web and have noticed that a lot of businesses have Web pages, with pictures of their products and catalogues. It seems like these Web pages would be a great way to advertise. Can I set up my own page? Is it hard?

— Mary Poling

A While cynics say the only people you'll find on the World Wide Web are uni students and computer geeks, there's no question that the Web has become the hottest on-line destination. (For those who've spent the past year playing Doom, the Web is a part of the Internet consisting of hypertext pages full of text, pictures and even sound.) One of the best things about the Web is that just about anyone can set up a Web page.

To do so, you first need to create a file with your content formatted using the HyperText Markup Language (HTML). HTML is a relatively simple scheme for conveying links, graphics and text. You can create HTML files in several ways. While there are stand-alone HTML utilities and HTML add-ons for Word and WordPerfect, it's not that hard to do HTML coding by hand in a simple text editor such as Notepad. Several pages on the Web show you basic HTML coding; you just insert the appropriate codes in your text.

Once you've created your file, save it as plain ASCII text with the extension `.htm`. To preview your page, load it into your Web browser as a local file (you don't need to be on-line). You now need to put your HTML file where other Web surfers can find it. Most users rent space on a Web server, usually from an Internet service provider; charges vary wildly, depending on where you live, who you are and what's on your page. Your provider will assign you a directory on the server and a Web address.

Now you must tell the world about your page. The easiest way is to include your Web page's address in your e-mail signature. Also check out the major directory pages (such as Yahoo at <http://www.yahoo.com>) to find out how they add pages to their listings. Finally, you can post a message to the `comp.infosystems.www.announce` Usenet newsgroup.

Judy Heim

REVIEW

OF REVIEWS

A list of the monitors and accounting software packages reviewed in previous months

MONITORS

BB • ADI/OCT Microscan 5AP

17in colour monitor
 Pros: Good picture quality; comprehensive controls; good warranty
 Cons: None significant
 Summary: Good value for money and suitable for all applications
 Optima Computer Technology
 Phone: (02) 841 2705
 Product Comparison October 1994

Deltacom F766D

17in colour monitor
 Pros: User friendly with precise and sensitive controls
 Cons: Lacks picture quality and no power

management or radiation compliance
 Summary: Power management and radiation compliance due in future models
 Alfa Computers
 Phone: (02) 317 3344
 Product Comparison October 1994

Digital SVGA Multisync

15in and 17in monitors
 Pros: On-screen display; picture quality
 Cons: None significant
 Summary: Combines good picture quality, on-screen display and a frugal use of power
 Digital Equipment Corporation
 Phone: (02) 561 5252
 Product Comparison October 1994

KTX Carretta 17

17in colour monitor
 Pros: Flat screen; LCD control displays; packaged with power management software
 Cons: None significant
 Summary: A good monitor with power management

Edge Computer
 Phone: (03) 9416 0099
 Product Comparison October 1994

MAG DX17F

17in colour monitor
 Pros: Picture quality; ease of use; red/green/blue adjustment
 Cons: None significant
 Summary: A very impressive monitor, represents good value
 Mogtron Monitors
 Phone: (02) 9975 3727
 Product Comparison October 1994

Mitsubishi Diamondscan 17FS

17in colour monitor
 Pros: Red/green/blue control; three-year warranty
 Cons: None significant
 Summary: Incorporates a host of goodies, including Mac compatibility and red/green/blue adjustment, while adhering to power management and radiation compliances
 Mitsubishi Electric Australia
 Phone: (02) 684 7777
 Product Comparison October 1994

NEC 5FGp

17in colour monitor
 Pros: Colour level and picture quality
 Cons: None significant
 Summary: Great picture quality and it comes loaded with features
 NEC Home Electronics
 Phone: (02) 868 1811
 Product Comparison October 1994

Optique 4000DC

17in colour monitor
 Pros: On-screen displays
 Cons: None significant
 Summary: Good value monitor with red/green/blue controls
 Keep Technology
 Phone: (02) 417 7166
 Product Comparison October 1994

Philips 4CM6282

17in colour monitor
 Pros: Apple compatibility; outscan; option of BNC or D-SUB
 Cons: None significant
 Summary: A good monitor but others in comparison represent better value
 Clear Distribution
 Phone: (02) 698 5599
 Product Comparison October 1994



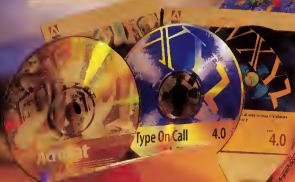
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Review of Reviews

Samsung SyncMaster 17GL

17in colour monitor
Pros: Apple and IBM compatibility; non-glore screens; two-year warranty
Cons: Lack of colour controls
Summary: A well-built monitor with full power and radiation compliance, that also offers compatibility with Apple computers
Samsung Electronics Australia
Phone: (02) 638 5200
Product Comparison October 1994

Samtron SC-7285XL

17in colour monitor
Pros: On-screen display
Cons: Lack of red/green/blue controls
Summary: A rebadged Samsung SyncMaster 17GL that is good value
Samsung Information Australia
Phone: (02) 9955 3888
Product Comparison October 1994

Sony CDP-1730

17in colour monitor
Pros: Picture quality; 0.25mm pitch
Cons: Lack of colour controls
Summary: A high-end monitor with good picture quality
Sony Australia
Phone: (02) 887 6667
Product Comparison October 1994

Teco TE1764

17in colour monitor
Pros: Picture quality; two-year warranty
Cons: Lack of colour controls, power management and radiation compliance
Summary: A good monitor that will be better value when it ships with power management and radiation compliance
Teco Australia
Phone: (02) 725 1233
Product Comparison October 1994

Videocom Antarctica

17in colour monitor
Pros: Non-glore cathode ray tubes
Cons: Some picture distortion
Summary: A good all-round monitor with great controls
Elite Industries
Phone: (02) 898 0222
Product Comparison October 1994

Viewsonic 17

17in colour monitor
Pros: Picture quality and three-year warranty
Cons: None significant

Summary: A good monitor with colour controls for colour temperature, rather than individual colour adjustment
Chips & Bits Australia
Phone: (03) 9696 1911
Product Comparison October 1994

ACCOUNTING SOFTWARE

Attaché 5 (for DOS)

Full-featured accounting software
Pros: Good support, flexible, strong on financial reporting
Cons: None significant
Summary: Module-based program that lets you grow with your needs
Attache Software Australia
Phone: (02) 9929 8700
SOHO PC June 1995

BestBooks version 1.1

Bookkeeping software
Pros: Simple books; Commond Centre windows; and Custom Forms Designer
Cons: Not multi-user
Summary: A novice-friendly program for keeping track of accounts payable and receivable, income and expenses and recording chequebook transactions
Data-Tech software
Phone: (02) 9955 3611
SOHO PC June 1995

Envoy (for DOS)

High-end modular accounting software
Pros: Upgradable; module-based; complies with Australian conditions; network option
Cons: None significant
Summary: A full-featured accounting package available with seven modules
Business Manager Software
Phone: (03) 9813 3022
SOHO PC June 1995

Moneywise

Bookkeeping software
Pros: Looks like traditional paperwork; reconciles bank statements; contents insurance inventory
Cons: None significant
Summary: Designed to provide up-to-date income and expenditure information
Solution 6
Phone: (02) 391 0666
SOHO PC June 1995

Microsoft Money

Home accounting software
Pros: Financial planning wizards, and ability to track investments
Cons: None significant
Summary: An inexpensive accounting package designed for home users
Microsoft
Phone: (02) 870 2100
SOHO PC June 1995

M.Y.O.B. version 4

Full-featured accounting software
Pros: Localised for Australian market; 3-D screens; expanded job tracking
Cons: None significant
Summary: A high-end package that combines ease of use with real accounting power
Data-Tech software
Phone: (02) 9955 3611
SOHO PC June 1995

Quicken 3.0

Home accounting software
Pros: Operates in conjunction with a range of other Reckon products; records banking transactions; writes cheques; balances accounts
Cons: None significant
Summary: A good example of a home computing product
Reckon Software
Phone: (02) 562 7900
SOHO PC June 1995

Sybiz QuickAccounts with Invoicing

Bookkeeping software
Pros: Handles multiple companies or sets of accounts
Cons: None significant
Summary: An add-on to QuickAccounts
Sybiz
Phone: (02) 9954 5211
SOHO PC June 1995 ■

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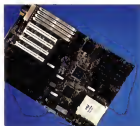
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A sausage has two

A rather hoary Swedish schoolboy joke has it that "all things come to an end, and a sausage has two". What fired that rusty old synapse in my alleged brain was the fact that my stint with *Australian PC World* ends with this issue. It's been a fun four-odd years, and I've particularly enjoyed being part of *Australian PC World's* Great Leap Forward, not to mention the opportunity the increased space gave me to work with all my friends in the Help Screen pages.

The mouse that purred

Just a short note to say thank you for printing my letter in the June issue (about the GPF when my Logitech mouse driver and WordPerfect for Windows couldn't agree to share memory). Thanks also to John Clarke, via CompuServe, for his contribution. Up until then I thought I was alone with this problem.

Finally, thanks to Bernie of BJE Enterprises of Eastwood, who kindly sent me the latest driver after I'd spoken to him on the telephone. The problem is now resolved.

— Mike Buggé, Kambah, ACT

PS: The "Mickeyed mouse" play on words was a resounding success with my workmates.

Spell that checker!

I thought the following "Letter to the Editor" from a UK magazine might be of interest to your readers:

For the benefit of all PC owners who rely on their spelling checkers to ensure accuracy



Send your questions and tips to
Help Screen
 Australian PC World,
 88 Christie Street,
 St Leonards, NSW 2065
 or e-mail to pcworld@idg.com.au

Due to our publication lead time, please don't expect an answer in the next issue. If your question concerns a problem with your PC, run MSD (Microsoft Diagnostics), which you'll find in your Windows or DOS directory (use the newer one). Run it from the DOS command line (Windows not loaded). Select *File-Print...* and when the printing dialogue box comes up, check *Report All* and *To File*, then *OK*. Copy the resulting file to a floppy disk and send it to us, or print it out if you prefer. This will give us a better chance of helping you. If you have Windows, include *SYSTEM.INI* and *WIN.INI* as well.

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I have a spelling chequer
It came with my pee see
It plainly marques four my revue
Miss takes I cannot sea
I've run this poem threw it
I'm shore yaw pleased to no
It's letter perfect in its weigh
My chequer told me sew

Incidentally, my grammar checker also found nothing wrong!

— Reg Manus, Willetton, WA

Editor's comment: *Thanks, Reg, that's a good reminder of a spell checker's main weakness: it'll find misspelled words but not misplaced words. I tried it against the Australian WinWord spell checker, and by George, it sailed right through without a hiccup.*

Pack it in

Q I hope you will be able to help me with my question about DoubleSpace. I have a Packard Bell 486SX, 4Mb RAM and a 170Mb hard drive (a whopper when I bought it 15 months ago). As I live on a disability pension, I cannot afford to buy a larger hard drive or purchase a stacking program. I'm trying to get work from home with my computer but am starting to find disk space a problem. I have no problem currently doing what I need to do on 4Mb of RAM and I am extremely happy with the system I purchased. Some of the applications I use (Word 6 is one) take up most of the available memory and disk space (only 40Mb left). If I were to set up DoubleSpace, would it slow my system down at all or take up extra memory that could cause my system to crash or hang? I hear many bad reports about DoubleSpace, but as I am only using my system for word processing for different clients, would it be suitable to use in this type of situation?

A second question I have concerns CD-ROMs. Are all CDs able to be run direct from the CD reader (Word 6 for example), or do some of the application programs have to be loaded onto your hard drive? I have inquired about this at many different computer stores and haven't had the same answer twice. If a CD-ROM can be used this way, it could help my lack of space problem.

I certainly hope you will be able to help me with these questions, as your Help Screen section has given me more advice and tips to keep things running smoothly than manuals or so-called experts.

— Rodney Hamelink, Mackay, Qld

A In your situation, DoubleSpace is an excellent idea. There were some problems with the early version (that came with DOS 6.0), but they have been solved now and your version (DOS 6.2) is perfectly safe. DoubleSpace is not the fastest, but it's reliable now

and, above all, it's free. You'll find no noticeable degradation of speed; writing to disk will be slightly slower, reading from disk may be slightly faster. You can check this yourself by timing how long it takes to start up WinWord before and after.

When you install DoubleSpace, make sure you leave enough uncompressed space on the hard disk to allow for your Windows swapfile — 8Mb would be plenty in your case. Also, your installation will be quicker and less dangerous if you clean as many unneeded files as possible off the hard disk before you start. If you can, it's a good idea to back up your data first. Don't back up program files; they're better re-installed from the installation disks if something goes wrong.

As for running applications straight off the CD, that depends on which application you're talking about — some do, some don't. You'll have to check the instructions in each case. If there is a minimal installation that runs the bulk of the program off the CD, you'll find that the installation program will present that option. It is possible in some cases to run an application straight from its installation CD without installing anything, but the only way you'll find out is by trying it on. Just open a File Manager window on the CD and double-click on the main program file; the worst that can happen is an error message. Typically, the message will be "Can't find xxx.DLL"; this is because many programs expect to find their runtime libraries in \WINDOWS\SYSTEM.

Upper memory in a 286

I particularly enjoy reading your help articles, especially when you digress and explain the basics — I sometimes need reminding. Speaking of reminding, I forgot to send a stamped, self-addressed envelope and ask for the 286 upper-memory manager a few months back. Piet van Rosendal's request (June) reminded me to get a copy for a friend who is stuck out on an isolated island.

He uses a 286 laptop that has lead-acid (gel) batteries. The batteries are more reliable in his generator-powered environment. He cannot afford the luxury of flattening NiCads (to keep them in peak performance), as he cannot guarantee power to recharge them; better to use lead acid batteries and keep them fully charged until the power goes off. Later notebooks are all NiCad-powered and unsuitable. The memory manager may be able to give his machine (which has 2.5Mb of RAM) a new lease of life.

— Harry Sheldon, Northcote, Vic

Editor's comment: *You've got it. Your friend's situation reminds me of my own in the late 'eighties; I spent five years running an XT, and later a 386-20, off a portable*

generator. That's when I learned to save my documents frequently — every time the fridge kicked in, the computer reset.

I do hope the memory manager works with his particular machine; the 286 chip sets varied a lot and I know it won't work with all.

Back to Shonk City

Q I was hoping that you would be able to help me out with a problem that has turned my birthday into a bit of a nightmare. I was recently presented with Encarta 95 for my birthday and was rather impressed, until the time came to install it and then the fun started.

I have contacted the supplier and just received the standard "hang on, what planet are we on again?" reaction over the phone. I have noticed that there are a lot of vendors around at the moment that sell PCs and software, but do not know the first thing about the products they sell when it comes to anything but the smallest problems ("have you checked that there are no loose leads in the back of the box?").

My limited knowledge of PCs comes from my own tinkering, and yet I have had quite a number of friends and friends of friends present me with problems with their new PCs that the vendor should have been able to rectify with only a basic knowledge of "the box". One such episode was caused (as pointed out in one of your articles) by a very badly done LapLink job, and resulted in the whole bundle of software including Windows having to be reinstalled.

Buyers should check around (through word of mouth) for vendors that know their products backwards, and do not give you the "sorry, I'm too busy making another sale" response when approached for after-sales assistance. The price on the bottom of the quotation should be only the second consideration when buying "the box". One of my friends saved \$200 on her first PC, but the PC spent the first three weeks of its life getting free board and lodging at my place.

Not all PC buyers know somebody who can tinker, either. I have heard of one person who paid a technician \$30 per hour for 18 hours (that adds up to a few pineapples even on the Windows calculator) to fix software and hardware stuff-ups on a new PC that the vendor just could not fix.

Anyway, back to Encarta. After loading Encarta, all seems to be well — the sound works, the video clips work, the still photos work, but after anywhere from one to 30 minutes it just locks up with no error messages, requiring a full re-boot, and won't return control to Windows. Upon lockup, a constant clicking noise is heard until re-boot; usually, I will hear a few clicks before it locks up, giving me the chance to quit before it happens. The problem

seems to occur mainly after enlarging a still photo and then closing it, but can happen under any circumstances.

I have tried a friend's copy of the CD with the same results. I do not have any other problems with the CD-ROM drive or sound card, and have no other problems with any other software. I have read the Encarta tips and have tried the suggestions within, including changing to standard 640 by 480 256C video mode (I normally run at 800 by 600 256C large fonts). I have tried using MSD and switching around IRQs in case of a conflict. I have tried removing other drivers etc, and using only the ones I need to run Encarta, but no go.

The computer is a 486DX4-100 (Intel Chip) with a SIS85C471 motherboard, 8Mb RAM, Sound Galaxy NX Pro sound card, Trident 9440 VL video card and a Creative Labs dual-spin CD-ROM drive. I have enclosed the MSD report and CONFIG.SYS, etc.

— David Roze, Wyndhamvale, Vic

A So tell me why we're putting up with this sort of thing from some dealers? If the dealers can't put their house in order, why don't we users form an association — and hand our seal of approval to those dealers, and only those dealers, that members have reported as satisfactory?

Short of that, I have to say in the strongest terms that if a dealer can't make the system he sells work properly, don't ever pay fantasy amounts to a third party to fix it up — just demand your money back. With the aid of the Consumer Affairs Tribunal if necessary. Your advice to give the price second priority after dealer capability is very sound, the only hitch being that few newcomers can tell good and bad dealers apart. It doesn't even do any good to go for a big brand; I have seen good work from some outlets and absolute shockers from other outlets of the same brand.

Having raved at length about the incompetence of others, I now have to admit that I can't help you a whole lot, but that's entirely in the best tradition of journalism . . . Your system files look entirely in order, and I have heard no rumours about compatibility problems among your components. About all I can say is that the clicking indicates a conflict involving the sound card, but according to your MSD report there's no interrupt conflict.

There still could be a port conflict; they don't show up in MSD. Symantec's More PC Tools contains a system analyser that emulates Plug and Play in software, and it does check ports for conflict. It may be worth your while getting More PC Tools for other uses, as well as the possibility that it could help with this problem.

The only problems with Encarta I have come across myself have been with video playback that involved Encarta doing something the video driver author hadn't thought of. You report having the crash ▶

occur in connection with bitmap processing, and you've tried using the standard VGA driver and that didn't help, so I'm more inclined to think the snag is on the sound side. It's possible that the Encarta team has pulled a few swiftness in that department, too.

As an outside possibility, you might consider the chance of an upper memory conflict. To try that, load your sound card driver low. If this turns out to do the trick, the next step is to try excluding different upper memory areas in EMM386 (see the DOS HELP file on your system).

Well-hung Windows

Q I have been experiencing Windows for Workgroups (3.11) hanging on exit to DOS. The system locks with the cursor appearing at the top-left corner of a blank screen. Only a cold start clears the situation. I have included a REPORT.MSD for your assistance.

—Dennis Drogemuller, via Internet

A This sounds like the famous Blank Screen of Death, which is a problem that occurs with early Novell NetWare drivers. But you don't seem to be on a Novell network, so we have to look elsewhere for the suspect. Your REPORT.MSD indicates only two areas that seem a bit smelly to me, namely SYSTEM.INI and AUTOEXEC.BAT.

SYSTEM.INI has a number of redundant repeated lines, which may confuse the system on quitting. Your AUTOEXEC.BAT has a very confused PATH string with multiple semicolons, which is too long. The truncated environment variable listing indicates that you're in the grey area at the end of environment space.

Try cleaning up your AUTOEXEC.BAT by amalgamating your several PATH statements, remembering two basic rules: put first on the path the directories you want to be searched first (for the sake of speed), and don't put pure Windows programs on the path at all — Windows handles this matter through the "working directory" line in each Program Manager Icon Properties listing.

Mumboard blues

In the June hardware Help Screen, you had an article on a fussy motherboard (from Ken Beattie, Tomakin, NSW). With regard to this problem, I have also found trouble of this nature between SIMMs of different tolerance or maker. I have cured this by adding an extra wait state in the CMOS DRAM cycle. I believe this may also occur with different DRAM speeds in one computer.

Although it's not recommended, some motherboard books allow you to have two different speeds of SIMM if the faster are in bank 0 (this is only applicable to the older 30-pin SIMM modules as fitted to Mr Beattie's 386 board). I would suggest he have two or three DRAM write wait states and

see if this cures his problem before buying new components.

This is applicable even though the CMOS DRAM test is enabled, as the HIMEM.SYS file probably has more stringent checks for RAM (this is my assumption, as no info is available from the Big M to know for sure). The last system I had problems with was a 486-66 with 8Mb of 30-pin SIMMs, and adding one wait state cured the problem.

Secondly, Darren Palmer had a problem with a slow machine in the Word Processing section of the July issue. I believe you missed the main problem when he stated that he was waiting so long for a file save at the beginning of the letter, but stated he didn't use a swapfile, yet later he did.

I suggest to you his problem with speed is with Windows having a lost or corrupt swapfile, as this will cause a veeeeeery slow system operation. I suggest he sets up a new swapfile (on an uncompressed drive of course), and use the defaults as recommended by Windows. We all know that, all else being equal (ie, set up properly), that 8Mb will allow his system and software to fly on a 486-66. All the systems I have set up with the same configuration certainly do so.

Thirdly, Don Goss from Currarong, also in the July issue, describes the typical signs of a CPU going out to lunch in the Hardware section of Help Screen. Fan not working, or not fitted? He doesn't say what speed of system he runs, but it was common practice when the 486SX-25 was released for shonky operators to overlock the CPU to 33MHz and laugh all the way to the bank. I have come across one such unit recently, with a dealer sticker over the CPU as a tamper seal, only to cover the rated speed of the CPU. I would suggest this be checked as a priority.

—Michael Price via Internet

Editor's comment: Thanks for that, Mike. Yet again we see that it's when the readers help each other that this column really fires. Your hardware info is very useful and has been added to the Wikström storehouse!

As to the lost or corrupt swapfile, Windows will warn on start up if this happens, unless virtual memory is set to none. In this particular case, you'll notice that Windows runs just fine with other applications, and only has trouble with OLE-linked complex documents under WinWord. I didn't print the system files as there's never space for that, but take my word for it that they show a correctly configured virtual memory.

Quickener tip

In PC World July 1995, page 188, Ian Atkins mentioned the automatic data backup feature of Quickener for Windows 3.0 and how it just keeps on accumulating backups, and you also commented on the way you handled it.

I got very annoyed and frustrated with the ▷



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Quicken backup facility, and wrote to Intuit regarding this. Their reply told me how to overcome the problem. This requires the modification of the QUICKEN.INI file by adding as the last two lines in the [Quicken] section:

```
Autobackup=0
```

```
Autocopy=0
```

This still does not stop the program establishing a BACKUP subdirectory, but at least nothing is entered into it, and the drop-down Backup warning no longer appears.

Thank you for the Help Screen, as I generally get some information from it that helps me, not just the contributor to whom you are responding.

— Bob Purdam, Fisher, ACT

Editor's comment: Thanks, Bob. I'm glad you dug out the answer for all of us — the change has certainly made my own life easier. For the benefit of Ian Atkins and others, QUICKEN.INI is located in /WINDOWS.

Wallpaper tip

In the May issue of your journal, Simon Goeschl of Victoria asked whether it was possible to change the wallpaper on his desktop automatically. I use an excellent shareware utility called WWPlus Wallpaper Manager, which does exactly that. It also allows you to edit an image and convert images to a different file format. I obtained a copy of WWPlus from Budgetware in NSW (catalogue code W015). They can be contacted as follows:

Reply Paid 3 (No postage stamp required)

Budgetware

PO Box 496

Newtown, NSW 2042

Phone: 1800 022 064

— Frank Sanfilippo, Bassendean, WA

Editor's comment: Thanks, Frank. We've had a couple of answers on this one, but we're always happy to add more. It's particularly useful that you tell us about the source.

Now you see it, now you don't

Q I have had the same occurrence on two computers. I had a 386DX40 and after exiting Windows 3.1 in the proper manner and shutting down the computer, the next time I switched the machine on it would not boot into DOS. Investigation found that both my AUTOEXEC.BAT and CONFIG.SYS files had been deleted. This happened only once on the 386, and both before and after this happening the computer continued to work properly and has continued to do so for its new owner who has had no problems with it.

In January of this year I bought a 486DX2-66

from the same dealer who had given me such good service and advice since I started computing, and the same thing occurred with this computer. I finished installing a small program in WFW 3.11, exited the program and turned off the computer. Later in the day I started the 486 and it would not boot into DOS. Again, the AUTOEXEC.BAT and CONFIG.SYS files had been erased. The last time this occurred the computer was less than 24 hours old. As with the 386, the 486 has continued to perform properly and has given no trouble at all. The fix was easy enough as I had copies of both AUTOEXEC.BAT and CONFIG.SYS so it was only a matter of minutes to get the computers back on-line again. My dealer can offer no explanation for this occurrence, and none of my friends and acquaintances who are into computers can give me any idea of the cause.

The 386DX-40 had DOS 6.0 and Windows 3.1 installed, and the 486 has DOS 6.22 and Windows for Workgroups 3.11. Can you shed any light on this for me? Or maybe a reader has had the above occur and was able to find the cause. If so, I would welcome any information on this subject, which is more annoying than disastrous, unless of course you have been caught without either a soft or hard copy of the necessary files.

— Les Topliss, Wynnum, Qld

A When you say "it won't boot into DOS", I'm considerably mystified. Just removing AUTOEXEC.BAT and CONFIG.SYS shouldn't stop the system booting — it should merely boot into a totally raw configuration with nothing set up.

However, leaving that aside, I can only conclude that you have a virus infection. It can't be a hardware problem as it happens on two machines, and such unlike machines. For the same sort of reason, it's unlikely to be an operating system or Windows bug.

The effect is fairly typical of a milder virus that makes a mere nuisance of itself at wide intervals, controlled by the date or some other event counter. I'd suggest that you contact the Brisbane PC User Group for some good antivirus shareware, or get on to the Australian Thunderbyte distributor Rod Fewster on (07) 3204 5000.

Forward to the past

Q Do you have any greybeards in PC World who have actual knowledge of old steam-driven XT's? I have two and they are driving me to distraction. Having seen them in museums is unfortunately not enough, as I need someone with practical experience, preferably still sane. I am enclosing the printout from one screen, a Kaypro XT with Attaché.

Problem 1: the system locks up after any program and will not return to DOS. The message on the screen reads: "Invalid COMMAND.COM. Cannot Load, System Halted".

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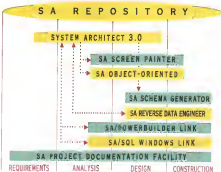
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I have to re-boot to continue and this fault appeared after a "technician" installed DOS 5 and tried to install a newer motherboard. I have tried to remove the trash from AUTOEXEC.BAT with EDLIN but did not succeed.

Problem 2: Can you please explain the AUTOEXEC.BAT file in the Hold Directory. I see that it is OS/2 and wonder if it is for Attaché.

I have a second machine, a Texas Instruments PC 30 with AutoCAD 1.18 (I wouldn't say that it's old, but when you change to C: you can hear somebody in there sharpening pencils!). I tried to replace DOS 2.22 with DOS 5 from the Kaypro. I was aware that there was a TI diagnostic program installed, and believe that it has come into conflict with something in DOS. Anyway, the whole thing locks up as soon as the TI check starts and I cannot get anywhere. Can you suggest something other than a 10-pound hammer?

— Alan Maynard, Mooroolbark, Vic

A Well, people collect and restore antique cars, so why not antique computers? As long as you don't try to take the corners too fast.

The problem — what am I saying — *one* problem with XTs is that some diverged considerably from the IBM norm, especially in the matter of system support software. The TI model may be one such PC, so try Texas Instruments on (02) 878 9000 to see if they happen to have an old manual lying around (or maybe one of us clean-shaven oldies). Your machines appear also to have been chopped about with a pretty heavy hand, requiring severe surgery. But don't use a 10-pound hammer — a double-bitted felling axe is so much more satisfying...

As for that OS/2 file, it must be a remnant from a misguided attempt to install a 32-bit operating system on an 8-bit (bus) machine! There should be a halo around it, for surely it is not of this world!

If you're willing to take a punt, this is the general procedure for revitalising doorstops:

1. Check for specialised control software, such as the mouse driver, and copy it to floppies (if there's a real-time clock on an expansion card, it's a typical candidate for tailor-made setting software).

2. Boot from the DOS 5.0 installation floppy. When the Install question comes up, answer *No*. The system will then attempt to run normally as a floppy-based system. Check if you can read the hard disk and run the odd program from it. If this works, chances are you'll be safe to proceed to step 3. If it doesn't work, continue anyway — what's to lose?

3. From the A: prompt, enter **format C:/S**. This is guaranteed to get rid of everything that could cause trouble, including hidden files and viruses. The /S switch installs the basic operating system and makes the hard disk bootable. This is essential if your DOS installation disk is an upgrade version; it'll refuse to install to a formatted but non-bootable hard disk.

4. Back at the A: prompt, type **install** and follow the instructions on the screen. If this doesn't make your XTs workable, get out that double-bitted axe.

Talking to the Macs

Q 1. If the RAM cache architecture on Otek 486 motherboards offers such a powerful speed increase, why isn't the principle applied by more/all motherboard manufacturers?

2. If Word for Macintosh is supposed to be able to read Windows Word files saved in Mac format, how do you get past the problem of the Mac constantly insisting that the disk "is not a Macintosh disk"? Of course, initialising will format it and the file will be lost.

Any help you could provide on the above would be enormously appreciated.

— Terry Kyle, Kirribilli, NSW

A Forgive me if I'm rude, but you may as well ask "if the Ferrari has such a great engine, why don't all cars have Ferrari engines?" Otek has pulled off a great design, and you can bet it's got all the protection against copying that Otek can arrange. Other makers may be trying their hardest to create something equally fast without plagiarising, but that sort of work takes time. Indeed, someone else may have a better idea in a few months. Then again, some makers may think that factors other than sheer speed (such as manufacturing cost) are more important.

With the Macintosh problem, there are two separate issues: MS Word file formats and Macintosh/PC disk formats. As you say, the file format question has built-in solutions as both the Macintosh version and the PC version of Word can both import and export the other's file format. The disk format problem can be solved by one of several utility programs. One I have tried myself is called MactDOS and is available in shareware form from most suppliers and bulletin boards. In your case, I suggest having a chat to the Sydney PC User Group on (02) 9972 2133. It's a good organisation to belong to, anyway.

Get behind!

Q I have recently struck a situation that is rather worrying. It involves an increasing number of lost clusters and compression structure problems on my Zenith Z-Lite 425L subnotebook. It is a 486SX-33 with a 170Mb HDD, which has been doubled via MS-DOS 6.2 DoubleSpace (the version which was being sold just prior to the DoubleSpace withdrawal by Microsoft early last year). I hope the attached material (MSD printout, CONFIG.SYS and AUTOEXEC.BAT) will give you sufficient data on my system.

My system is a "working dog", by the way, not a "pet pup". I use it every day in my business as I ▶



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The Help Screen

GENERAL Q&A

travel around meeting with clients. The main programs I run on it are Windows for Workgroups 3.11 with Word 6.0A, Excel 5.0, PowerPoint 4.0 and Publisher 2.0, along with Act! 2.0 for Windows and a DOS-based database program for order-entry and stock control of some of the products I sell.

For 12 months I used the DOS-based ScanDisk and Defrag to clean up my system each week, but rarely found any problems to fix, and never had a defragmentation greater than two or three per cent. Then I started using Norton Utilities 8. The first time I did so (from DOS), Norton Disk Doctor found numerous lost clusters, FAT problems and compression structure problems. And Speed Disk told me my compressed drive was only 54 per cent unfragmented!

When I got back into Windows, I found the system ran noticeably faster. I also found, to my surprise, that File Manager was showing 94Mb free, compared with 70-75Mb free that I had been running with for 12 months, so Norton had obviously done an effective job of cleaning up the disk.

Since then, however, almost every time I exit Windows, Norton Disk Doctor (which is loaded from AUTOEXEC.BAT), finds at least three or four problems: lost clusters and compression structure problems mainly, but sometimes FAT errors too. Then I noticed my File Manager free space indication had slipped back down to the low 70s again.

But when I ran Speed Disk, it came back to the high 80s or low 90s. This disk degradation seems to be happening all too often. I have even had cases where the available free disk space has gone from about 90Mb to 75Mb after just one session's work on the system.

I have two questions: is it normal for the Norton products to produce such a different result from the DOS-based equivalents, and is it normal for so many disk/file problems to be generated so frequently?

And I guess the obvious follow-on from this is, if these symptoms are not normal, do they indicate a virus or other ominous condition? I don't have virus protection, as I have not considered that I have been exposed to such problems, but I may have to change my consideration of that.

— Neil Clark, Lane Cove, NSW

A Speaking of working dogs, I have to tell you about this farmer mate of mine who named his dog "Please". It quite startles you the first time you hear a raucous "Get behind, Please!" echoing around the paddock.

As for your own electronic canine, I have to ask if you often have power failures or simply switch off when you're finished with your work; they are some of the most common causes of lost sectors, the most common being system hangups that force you to re-boot or restart.

Lost clusters and allied items are simply files that

were open at shutdown — including invisible temp files — which never were closed and recorded properly. It's absolutely necessary to shut down in an orderly way when you're through, by which I mean exiting from every program and finally Windows itself before switching off.

Only if you do follow this procedure and rarely have system hangups would I suspect a virus. Having said that, I also have to say that there's no such thing as not being exposed to viruses — even shrink-wrapped software has been known to be infected. I'd suggest on general principles that you get a good anti-virus package, such as VET or Thunderbyte. The cut-down antivirus program that comes free with DOS is better than nothing, but only just. Curiously, all the best antivirus programs are available as shareware.

And if it's not system crashes and shutdowns, and not a virus, what could cause the trouble? Apart from a faulty application program or utility, which you'll soon find if you keep track of what's running before trouble appears, there's only hardware malfunction. The controller card could develop an intermittent break and the disk could develop surface defects, but I think we can discount those problems here — a faulty card would make trouble during operation in other ways than just lost sectors, and Disk Doctor checks the disk surface if you let it.

Yes, it's normal for the Norton disk care products to be a lot sharper than the MS-DOS freebies. They have a long history of success. In the same vein, I'd suggest replacing DoubleSpace with Stacker 4.0; the extra space (compression typically increases from 1.6 to 2.0) would come in handy on a machine like yours, and the extra reliability wouldn't hurt, either. It's also just possible that your problems are caused by a defective DoubleSpace program. Just read the fine print on the Stacker box and make sure you get the latest issue, which is compatible with 32-bit file access.

Your system setup with a start-up menu looks fine. I'd suggest a few minor improvements:

- If you don't actually need SETVER, REM it out as it takes up RAM for nothing. Only reinstate it if you get an error message "Wrong DOS version" when running an old DOS program.
- If you don't use embedded ANSI commands to dress up your DOS screen, REM out ANSISYS in CONFIG.SYS. At least move it to the menu section that loads plain DOS, so it doesn't waste memory space that Windows can make use of.
- Move the DOSKEY command line in AUTOEXEC.BAT to the DOS section; it takes up space for nothing under Windows.
- You have C:\CARDWARE twice in your PATH statement; I'd delete the first occurrence.
- You should run Disk Doctor and Image before you start Windows, not after — that way, Windows gets the benefit of running on a freshly-tuned system every time. I'd suggest moving the NDD and Image command lines before GOTO %CONFIG%.

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My memory is going

Q I have a 486DX2-66 with 8Mb of RAM and run DOS 6.22 and WFW 3.11. On normal bootup I was always able to get the following memory allowance: largest executable program size, 616K; largest free upper memory block, 32K.

I have recently changed the motherboard (from an Expert Board 4044 to an Expert Board 4045) to provide more options for RAM configurations. This was due to the original motherboard's inability to configure to 12Mb. The work was carried out by the dealer who sold me the original machine, with the only cost being the difference between the two boards. There were no other changes made to the machine.

My problem is that now when I boot up the machine, the memory has dropped to 586K and 10K respectively, although very occasionally (virtually never) it will boot up to the original figures. I took the machine back to the supplier immediately for checking as I feared that something had gone astray.

The dealer stated that not all motherboards have the same amount of memory available and that as I have a slightly faster board with better options, I can't have everything. The dealer also believes this to be a software problem and states that the machine did not really have that much memory (616K) available. He also states that as I use HIGHSCAN NOEMS when loading EMM386.EXE, the machine would be unstable if it could achieve these high memory figures. He showed me this in the DOS help under EMM386/HIGHSCAN.

I have included copies of my start-up files and a copy of the memory allocation of both normal bootups after typing mem/c. You can see that when the machine boots with lower memory, the drivers etc. are not loaded in the order they should be. Am I really stuck with this new amount of memory or is there something I can do to get it back?

In the July issue of *PC World's* Readers' Forum I noticed a request for a review and comparison of motherboards. Perhaps this would be a good opportunity.

— Neil Lofts, *Hoppers Crossing, Vic*

A You'll be relieved to hear that your problem is highly fixable. It's simply that the choice you make from your start-up menu determines what devices and TSR (terminate-and-stay resident) programs are loaded. Some choices take up more memory than others. In your particular case, it's mainly the order of loading: sometimes the mouse driver and SmartDrive wind up in DOS memory, sometimes in upper memory.

Another strange item is that the CD driver MSCDEX sometimes doubles its size. This could be a flaw in the particular version you're using, which appears when loaded in a particular way. If this

persists after reorganising your system files (see below), you might try using the standard Microsoft driver, which resides in the directory WINDOWS\SYSTEM. To try this, just change the path shown in the command line from C:\SB16\DRV\ to C:\WINDOWS\SYSTEM\ . If this doesn't work out, you'll have to change it back, of course.

As for your dealer, who was very decent about exchanging motherboards, the DOSHELP comment on HIGHSCAN is misinterpreted. What it really says is that some machines can't handle HIGHSCAN and it's nothing to do with how much memory is available. HIGHSCAN is merely a testing utility.

If you have trouble because of memory shortage — which you shouldn't, as your system is quite normal — there are a couple of little things you can do. Put REM in front of the SETVER command line to deactivate it — you'll only need it if you run certain old DOS programs. If you get an error message "Incorrect DOS version", all you need to do is remove the REM. I'd also eliminate DOSKEY, at least from the menu option that runs Windows.

You can make quite big gains by moving the SMARTDRV command line earlier. In your case, the low memory situation comes when it loads last and fails to enter upper memory. While it would seem ▶

```
DEVICE=C:\DOS\HIMEM.SYS
DOS=HIGH,UMB
DEVICEHIGH=C:\SB16\DRV\CTSB16.SYS /UNIT=0
/BLASTER=A:220 I:5 D:1 H:5
DEVICEHIGH=C:\SB16\DRV\SBDC.SYS /D:MSCD001
/P:220
DEVICEHIGH=C:\SB16\DRV\CTMMSYS.SYS
REM DEVICE=C:\DOS\SETVER.EXE
FILES=40
STACKS=9,256
LASTDRIVE=F
```

```
[MENU]
MENUITEM=STD,Windows
MENUITEM=EMS,EMS configuration
MENUITEM=CD,CD GAME configuration
MENUDEFAULT=STD,5
```

```
[STD]
```

```
DEVICEHIGH=C:\WINDOWS\IFSHLP.SYS
```

```
[EMS]
```

```
DEVICE=C:\DOS\EMM386.EXE 2048 RAM
```

```
[CD]
```

```
DEVICE=C:\DOS\EMM386.EXE RAM
```

Figure 1: Cleaned-up CONFIG.SYS with menu

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The Help Screen

GENERAL Q&A

```
@ECHO OFF
LH C:\DOS\SMARTDRV.EXE 2048 128
SET MOUSE=C:\MOUSE
LH C:\MOUSE\MOUSE.EXE
SET SOUND=C:\SB16
SET BLASTER=A220 I5 D1 H5 P330 T6
SET MIDI=SYNTH:1 MAP:E
PATH C:\DOS;C:\WINDOWS;C:\QUIKMENU
SET TEMP=C:\TEMP
C:\SB16\DIAGNOSE /S
C:\SB16\SB16SET /P /Q
PROMPT $p$g
GOTO %CONFIG%
LH C:\SB16\DRV\MSCDEX.EXE /D:MSCD001 /M:15

:STD
WIN
GOTO END

:EMS
GOTO END

:CD

:END
```

Figure 2: Cleaned-up AUTOEXEC.BAT. Note that SmartDrive loads first

that its 30K should fit into the 32K upper memory that's free when it comes along, SmartDrive has special needs.

It sets up larger buffers during its loading procedure (I think it needs about 40K), which it then removes again. If you load it earlier, it will successfully load into upper memory and give its extra space up to what comes after, so you can fill more of upper memory and leave more standard memory free. Another small benefit from loading SmartDrive earlier is that it speeds up the rest of the loading procedure.

Your start-up menu loads SmartDrive only on one option, but there is never any reason *not* to load SmartDrive, provided it can go into upper memory. SmartDrive speeds up DOS operations, too. Your menu should also be rejigged on general principles of logic — it's pointless to repeat the same items in every option. Have a look at a suggested remake in Figure 1 (CONFIG.SYS) and Figure 2 (AUTOEXEC.BAT) to see what I mean.

Tiny shoe

Q Before I ask any questions or make any comments I would just like to say "Thank you" to all those readers (see July 1995 issue) who offered help regard-

ing my Windows wallpaper problem. It has been much appreciated and, by the way, it works fine!

Now to my question. I'm thinking of buying a shareware program called MicroBoot 6.1 (available from PD Software Services, 8 Bentley Street, Wantima, Victoria 3152) that allows up to 10 levels of system configuration for both DOS and Windows, and allows for up to 10 different Program Managers. My question is, would this free more memory and improve performance in Windows by allowing, for instance, each program to use a different Program Manager? (I am running MS Word for Windows 6.0, Microsoft Publisher 2.0, Lotus AmiPro 3.0, PaintShop Pro, Sound Blaster Pro applications, After Dark screen saver, plus a few DOS-based programs).

I have enclosed copies of my CONFIG.SYS, AUTOEXEC.BAT, WIN.INI and SYSTEM.INI files, just in case you can think of another way of improving my performance in Windows 3.1. I have a 386DX-40 with 4Mb of RAM, and no, at the moment I cannot afford to buy another 4Mb of RAM.

Also, one more quick question. Could you tell or advise me on a good program for librarians, preferably DOS-based. I have tried a program called Book Librarian 1.53, which is good but it lacks searching capabilities: it can search a book by Title, Author, Subject or book type, but that's it! If you can help me find a more advanced program it would be much appreciated.

— Simon Goeschl, Grovedale, Vic

A I haven't heard of MicroBoot before, so I can't comment on its performance, but it sounds interesting. Perhaps a reader has experience of it. You can of course have different DOS setups by using the Startup Menu facility (to find out the details, type **help** at the DOS prompt and search for any word that includes "menu"). As for having several Windows setups, I'm not aware of any benefit except that of letting PC sharers have their own personal setups.

Programs for librarians are, again, outside my experience, so I throw the subject open to readers.

As for your system files, they look fine for a Windows machine, except that I'd recommend removing the buffer size specifications (256 256) from the SMARTDRV command line as they make it practically useless. The default value (blank) usually works best as SmartDrive makes its own decisions on the fly. See if you can turn 32-bit file access on after doing this change — you'll find new buffer sizes appearing automatically.

To turn on 32-bit file access, open the Control Panel and double-click the 386 Enhanced icon. Select *Virtual Memory and Change*. When the final dialogue box opens, you'll see check boxes for 32-bit Disk Access and 32-bit File Access. If they're not greyed out (indicating that your system isn't compatible), check them and answer OK to everything. This gives you the fastest disk access. ■

Out with the old, in with the new

Q I have a 486DX-33 with 4Mb of RAM, 256K cache, 212Mb hard disk, plus a number of other features, and an HP Deskjet 540 printer. I use DOS 6.2, Windows 3.1, MS-Works for Windows 3.0, QFiler and XTree Gold (for file management), PC Tools, plus graphics programs.

My main word processor is an early model Galaxy, which has been modified so it is still a very useful program that, for ease of use, in some ways leaves MS-Works for dead — especially when it comes to knowing precisely where you are on the page as you type, ease of reformatting, block handling and sorting columns, etc.

In conjunction with Galaxy I use a desktop publishing program called Key Publisher. This is also simple and straightforward to use, sufficiently so that with the combination of the two I have written and published several small books (up to 96 pages), most on the subject of local history.

It is only recently that I invested in MS-Works for Windows 3.0, as I thought a more modern word processor may be useful — in some ways it is, but there are disappointments, particularly not knowing exactly where I am on the page, but I can manage.

All the above is a preamble to acquaint you with what I have and use. Within Galaxy and Key Publisher, both DOS programs, I have hundreds of files which I wish to retain or work on, so now I come to the problem.

When I import a text file into MS-Works it arrives with a hard return marker (^p) at the end of every line and paragraph, instead of only at the paragraph end. The beginning of every line has four dots and every space between words has a single dot. All these can be seen when I turn on *View>Show all characters*.

The fact that this garbage is present prevents me from formatting, justifying and any other work, as everything is locked between the end of line/paragraph markers. If I type work straight into MS-Works there are no problems — it does all it is supposed to do. If I remove the ^p using Replace

(with nothing), then naturally everything runs together.

I have enclosed a page of original text printed from Galaxy, complete with bold and italics, which was in response to printer commands placed there by me. Another page shows it exactly as imported to MS-Works, minus the special characters of course, as they will not print. A third page shows the result of removing the ^p from each line.

I could stay with Galaxy and Key Publisher but do not see why I should ignore MS-Works, which, amongst other things, offers various fonts and sizes that I need to get from Key Publisher, not being available in Galaxy.

I have imported files directly into MS-Works from Galaxy, directly from Key Publisher and saved as ASCII files — all with the same results. I also used QFiler — the file manager — to move a file directly from Galaxy to MS-Works, with the same result.

By spending considerable time, I can unravel that which appears on the third page so it finally looks like what I want, but it's a waste of valuable time. The imported text can be centred or left aligned despite the ^p etc.

Obviously, my question is whether there is any way I can import text from Galaxy to MS-Works, so that with the minimum of work, it can eventually look OK.

Enclosed is a disk with a copy of the Galaxy text and on the same disk is a copy of the imported text, taken from MS-Works. When I look at these two files in Galaxy, they are exactly the same, so the double importation has made no changes.

I note in your preamble that you request a copy of MSD etc, but I don't think this will help you as mine seems to be a software compatibility problem, and the computer is running OK in all respects. Incidentally, I also have a Panasonic KXP1123 24-pin dot matrix printer and the same print-out occurs there.

Sorry to have been so longwinded, but it seems impossible to tell you of all the possibilities in less space. ▷

The Help Screen

WORD PROCESSING Q&A

I will be most grateful if you can surmount the problem. If I am trying to do the impossible then I will have to live with it — I can still access everything I have in Galaxy and format it in Key Publisher, so all is not lost!

— Eric Jamieson, Meningie, SA

A Galaxy grew out of a basic DOS text editor and still has the old-fashioned text editor way of organising lines, namely with a hard return at the end of each. Modern word processors carry line length information in the paragraph format block and break the line for display purposes on the fly. This is how it can quickly and easily break the line in other places when you change one of a number of factors — indents, margins and font size for example.

The dots displayed in the "Show all characters" mode are simply spaces made visible and reflect the way Galaxy formats the text. You can modify the arrangement of spaces by automated search and replace, but unfortunately the search feature won't let you search for the end-of-paragraph symbol. So if you want to convert files from Galaxy to MS-Works, I'm afraid you're up for a bit of elbow grease.

However, all is not lost. You can use Windows Recorder to mechanise most of the process. Put the cursor at the start of the text, then start recording. Press <Ctrl> + <down arrow>, then press <Backspace>, finally press <Spacebar>. Stop recording and assign your macro to a function key you're not using, say <F12>. Now, every time you press <F12> (or whatever), you replace the next end-of-paragraph with a space and if you keep rattling that key, your text will become a single paragraph. Breaking it up into paragraphs again is just a matter of "mousing" the cursor to where you want it and pressing <Enter>.

You can create macros for reformatting paragraphs in exactly the same way, by recording the keystrokes. You can create several, for different paragraph formats, which is one up on Galaxy.

If you start each such macro with <Ctrl> + <up arrow> it lets you reformat without worrying about where in the paragraph you start — the macro will always start at the beginning and you only have to plonk the cursor down somewhere within the paragraph.

All this would of course be easier in Word for Windows or some other high-end word processor, because it has its own macro language and ready-made paragraph and header styles.

Now, it's a funny thing about "knowing where you are on the page" — in lines and columns, I assume. That was important back in the non-graphic DOS days, because the fonts were always equally spaced as in a typewriter and the same numbers always described the cursor position on the page.

With modern what-you-see-is-what-you-print word processors, which MS-Works is, albeit at entry-level, fonts vary wildly and are variably spaced anyway, and the only meaningful information about cursor location is gained simply by looking at the display.

Interestingly, WinWord displays the vertical position in centimetres from the top of the paper (not the margin) and lines from the top of the margin, and the line count wraps around any columns. The horizontal position is given in columns only, starting from the left edge of the column.

I'm sure you'll find that once you've changed your viewpoint to working graphically with the rulers on the display, you'll never look back to the old character-based days.

Marginalising WinWord

Q As a screenwriter, I use macros constantly in Word 6.0 for Windows for dialogue margins, inserting repeated text like "Continued", etc. The problem I have is that Word seems to hate having margins changed on small portions of the document. Regardless of settings in Page Setup and Options, it constantly changes the margins on the whole document. Sometimes it works, but other times the same document repaginates itself (even when this option is turned off) with the dialogue margin (5.25cm left and right) for the entire script.

Surely I don't have to resort to WordPerfect 5.1 for DOS, which can do it effortlessly? I don't really want to buy the Script Wizard available for Word when other word processors can do it.

— Terry Kyle, Kirribilli, NSW

A The thing to remember about margins is that they're originally a printing issue and as such relate to the whole document. WinWord allows you to set different margins by sections (see *Margins, Overview in Help-Index*), but section boundaries can be tricky to handle whether you tie them to page boundaries or not. You'll find it a lot easier to achieve the effect you want by using indents.

You can apply indents in a number of ways, but I find the following easiest for the sort of thing you have in mind: if it's a single paragraph, just place the cursor within the paragraph, and if it's more than one paragraph, click anywhere within the first paragraph and drag to anywhere within the last one. Now grab the indent pointer in the ruler and drag it to where you want it.

If you want a precise numerical indent, you can right-click anywhere within the selected paragraphs, select *Paragraph* from the pop-up menu and operate to your heart's content on the dialogue box that appears. ■

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On the wrong bus

Q I have an IBM PS/2 SX-55. I would like to run multimedia to get the benefits of CD-ROM. I recently bought a Sound Blaster card to try that out first. To my dismay it has a different edge connector and I cannot even plug it in.

Does this mean that the PS/2 cannot be expanded or upgraded, or is there perhaps an adaptor on the market? The local shops have no idea.

—Fred Parsonage, Waikiki, WA

A I'm sorry to hear that the local shops are so ignorant ("couldn't find their bum with both hands tied behind their back", springs to mind). The problem you've bumped into is no dark secret. The PS/2 has its own proprietary bus type, which IBM designed in a foolish attempt to lock its customers in (curiously, at about the same time, Apple decided that this was a bad policy and opened up its proprietary bus to clone makers).

The good news is that the PS/2 can indeed be expanded. The bad news is that because the PS/2 Micro Channel bus is out of the mainstream, the cards tend to be a bit more expensive and not all makers bother with a PS/2 version. However, there certainly is a Sound Blaster card for the Micro Channel bus, and if your local dealer still goes "Duuhh", ring the main distributor, Creative Pacific, on (02) 9906 8887, or IBM on (02) 9951 9334.

Wrong number

Q I have two questions that I hope you will be able to help me with. I bought a 386DX-25 system with 1Mb of RAM and a 40Mb hard disk two years ago. I decided to upgrade the system with more RAM and a bigger hard disk. A friend of mine lent me 8Mb of RAM to try out before I decided how much more RAM I should buy.

When I turn on the PC, I can see DOS checking memory, counting through 8Mb no problem, but as soon as the AUTOEXEC tries to load HIMEM.SYS, an error message appears, saying "Cannot enable A20 line. Extended memory not available".

I read the board manual, looking for any setting I have to make, but found nothing. I tried to enable the A20 line through the BIOS Setup but the same error occurred. I have asked other sources, but did not get any answer that makes sense. I hope you can help me.

The second problem is with printing in a network environment. I work in an office where we run Windows 3.11 on 10 computers, printing to three HP560 printers. When printing through a local port we have no problem. If we try to access the printer of

one PC from another PC via the network, the first job prints OK. However, the first print job will tie up the port — the printer finishes printing, but the Print Manager Status keeps displaying that the printer is still printing and it will remain in that state forever. The only way to clear the fault is to turn off the Print Manager and turn it back on again.

—Peter Nguyen, Collingwood, Vic

A You're not saying what happened when you put the old memory back in. If everything went back to normal, you simply had the wrong memory modules. Some motherboards are even sensitive to the brand of memory chip, so you should find out from your manual what the special requirements of your machine are.

If you're still having trouble after removing the borrowed chips, there is a risk that something on your motherboard got zapped by static electricity during the installation.

With the printing problem, you don't say if you're networking through Windows for Workgroups or using some other system. If it's Windows for Workgroups, the printer server is supposed to return a message to the originating machine when the print job is finished. To do this, it uses Winpopup and the Mail mechanism. Since it seems to happen to all workstations, it wouldn't be a missing Winpopup file, but it's possible that you have corrupted or haven't installed MS Mail or one of its DLLs, and the system simply sits there sending a message and waiting for an answer.

Those are the possibilities I can think of, and the MS Mail problem is really the only one that would affect all workstations. If you're using another network operating system, such as NetWare or LANtastic, I couldn't even guess what the problem is, I'm sorry to say.

The 32-bit challenge

Q Knowing how much you like a challenge, I present you with our problem (and I wish I had done so a long time ago). I enjoy your section of PC World the best, as my hobby has been hardware and setting up computers to run at their best, while my wife teaches software. We purchased a new 486DX2-66 with 16Mb RAM and a 1,080Mb IBM HDD in November 1994. The HDD is partitioned into three drives to reduce slack.

We got what I considered a good deal at the time, but it did involve us setting up the computer right from scratch, including loading DOS and Windows ourselves.

The problem we have is that we never have

been able to engage 32-bit disk access. In fact, for some time I could not engage 32-bit file access until I read in the Help Screen to disable IDB Block Mode in the BIOS, which worked. Both WinProbe and WinTune indicate that I should have 32-bit disk access engaged, and the motherboard and Enhanced IDE card both say it is possible. The 32-bit disk access check box is not ghosted.

If I cross the box for 32-bit disk access or edit WIN.INI manually, Windows boots with the message: "WDCTRL Validation failed at phase 07, DF", and asks me to press any key to continue without 32-bit disk access. Then, when entering Windows, the 32-bit file access is also back at 16-bit, even though the box is still checked.

I tried different settings in the BIOS, always returning to the original settings without success. What I did discover was that my BIOS had some lines missing and some others added from the lines that were in the handbook, and I argued with the vendor that I could have a faulty BIOS, or it had rewritten itself somehow, which he denied was possible. I was of the feeling that it had "adapted" itself

somehow to the larger drive and partitioning, but didn't know enough to argue the point.

The missing lines indicated they were important to what I was trying to achieve, and as I later found out, a BIOS can build its own Enhanced Drive Parameter Table.

The lines missing are:

IDE LBA Mode
IDE 32 bit Transfer
Video cachable option
BIOS cachable option

The lines added were:

Non cachable area #1 size
Non cachable area #1 base (which is ghosted anyway)
Primary Master IDE LBA mode
Primary Slave IDE LBA mode.

The supplier of the computer has been helpful to a point, but I don't have any confidence in their ability to solve the problem after many telephone conversations and promises to fix it. They have maintained that it is a driver problem. They have been very good with easily solved glitches I've had,

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The Help Screen

HARDWARE Q&A

and have replaced a fan and card without hesitation, but avoid anything "too hard".

I also had conflicts with my Diamond Stealth 64 DRAM driver which they could not fix, and I am presently running on an S3 generic driver until Diamond USA reply to me through Chips & Bits (now there's a switched-on company — very attentive and helpful).

I researched 32-bit disk access as much as I could and discovered that the Windows WDCTRL is outdated for large drives, and that we should replace it with dedicated drivers for this purpose. We had an Enhanced IDE I/O card which had its own drivers for 32-bit disk access and so I installed them to find they gave the same failed validation message.

I researched further and saw a reference to the new Western Digital WDCRV386 Enhanced driver that is supposed to be the latest and greatest, and was able to download it from CompuServe (WIN31.EXE in the IBM Hardware forum) as well as a lot of support text files, which I studied. When this driver was loaded exactly according to instructions, Windows now hesitated with a message that I had a "Fatal error", and I could continue without 32-bit disk access. Again, 32-bit file access was turned off.

From the text files, it seemed to me that I had an outdated or incompatible BIOS. However, the BIOS is an Ami BIOS dated 25/7/95, so it seemed unlikely.

Talking to yet another independent source, I was told that the system probably was using the card BIOS, which was quicker than 32-bit disk access anyway, and that I probably had it operating at its quickest as it was "tricking" the system BIOS and still behaving as a 32-bit disk access or better. This was hard to understand, so I would appreciate your comments. I remember when drives first started to exceed 538Mb that to trick the system BIOS was the immediate method used, but since then more elegant solutions have been developed with compatible BIOS. I would very much appreciate your assistance in this matter.

— Shaughan Syme, Manly Vale, NSW

A challenge is one thing, friend, but this is a long way beyond my ability. The best I can do is throw this open to other readers. I'm sure there will be a few out there who have not only come across the same problem, but solved it as well.

Having said that, I'm suspicious of the /D switch on your MSCDEX, which is supposed to match the value of the /D switch on your CD device driver, and may cause a cache clash (say that three times quickly).

There are also another couple of drivers I'm not familiar with. You may have tried this already, but my first step would have been to REMO out everything except a bare-bones minimum system (no CD), possibly after deleting and reinstalling Windows, to see if 32-bit file and disk access would work then. If it did, your next step is obviously to reinstate one gadget after another until the trouble reappears.

On the other hand, the way the timing of this column has turned out, you may like to forget about the whole hassle and start from scratch with Windows 95. It handles disk caching in its own delightful way — well hidden from the user's prying eyes — and in fact kills 32-bit access in a Windows 3.11 dual-boot system. Windows 95 has worked beautifully on a couple of systems where I couldn't implement 32-bit access due to hardware incompatibility.

And no, a ROM can't change itself — it's physically incapable of it, which is why it's called Read-Only Memory. It can of course change the contents of buffers under its control, and if the ROM has had its contents "shadowed" into RAM for greater speed, the shadowed copy can of course change, but the changes would be lost each time you switch off.

Manual wanted

Q I have a number of problems. The first is that I have an Award Notebook 3300A machine, without a manual, ha ha ha (it was a gift). It keeps giving me a report of a "system configuration error" at boot time. I have looked at Setup and I cannot see what is wrong (enclosed printout), being a novice. Also enclosed is a print-out of MSD. The question is what have I got to change, and how?

Next question is about the ports on the machine. It has the usual two serial and one parallel port, plus an external CRT port and an external keyboard port with a toggle switch for the latter. On connecting the CRT to an external monitor, the screen is blank. How do I get the external CRT to display?

My third question is what firm is the distributor for AWARD machines, so I can ask about getting a manual for this machine?

The fourth question is about the function keys. They do not operate under any combination of key press! In particular, the Sleep, Standby and Norm would be a great help with the battery lasting only two hours, less without the functions mentioned.

— D F Newton, Richmond, NSW

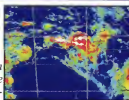
A You definitely need the manual to straighten this one out, so let's hope there is a reader out there with the same machine who can help you out with a copy of the important bits. I'm not aware of an importer for this brand, but perhaps somebody else can help out.

Your system configuration error relates to your video setup. MSD indicates that you have two different drivers set up and they don't get along.

The CRT problem has two possible causes: the computer fails to identify the monitor, which could be because it's the "wrong" brand, or because its connector isn't wired the "right" way. There is obviously a standard way to wire VGA connectors, but a number of brands (especially in the "early" days six or seven years ago) used their own pinouts with added ▶

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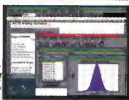
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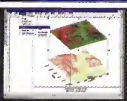
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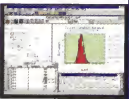


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functions (I have come across two such machines). Once you get hold of a manual, you should be able to dig deeper into this one — I expect there should be a way to tell your computer about the monitor.

The function keys are usually colour-coded and operate when a Shift key of the same colour is either pressed first or held down. I expect you would have tried this with no luck, which makes this another matter for the manual.

EZ Out

In the July hardware Q&A, there was a letter about an EZ utility used to set up hard disk access beyond the 545Mb limit. If it is the same utility that comes with some Seagate drives (EZ.EXE), the only way to get rid of it, apart of doing a low-level format, is to use FDISK/MBR to remove it from the partition table.

— *Jari, via Internet*

Still not so EZ

I have just read your columns at the back of the July issue and have some information that may be of use regarding the "Not so EZ" item (page 198). EZ is a utility supplied on all Seagate hard disks over 500Mb. From the EZ manual:

528Mb system capacity limit

Computers using DOS and some BIOS impose a 528Mb capacity limit on ATA disks. This occurs because the BIOS is designed to use up to 1,024 cylinders in the translation geometry for mopping the data surface of the drive. The drive has more than 1,024 cylinders.

The BIOS needs to be able to use LBA or ECHS addressing systems. The manual gives a full set of instructions for installing and configuring the driver. Basically, the driver intercepts the call to the BIOS table and translates it. The upside is in a 540Mb disk you get about 538Mb. The downside is that if the driver gets lost, so does all your data.

— *Matt Howard, via Internet*

Editor's comment: Thanks for the information, Matt. You mention the reason why I don't recommend proprietary solutions like this: they put you out on a limb. If EZ goes belly-up, so does your data. I think it's a lot safer to subdivide the disk into logical drives of less than 528Mb, which also has the advantage that there is less waste of space. As you probably know, DOS allocates space in clusters of sectors that are bigger for bigger drives (because DOS can't keep track of more than 64K clusters). So if you have files of a few bytes each on a hard disk larger than 1Gb, each rattles around in an allocated space of 32K. And since few files will happen to fill an exact number of clusters, there will be some dead space at the end of each and every file. On a 1Gb disk in one piece, 1,000 files will tot up a hair under 8Mb of wasted space. If you split the drive down the middle, you'll save

4Mb of that. Not a lot, but it could make the difference between go and no go.

No Waves

Q I have a problem with a Sound Blaster 16 card in that it will not produce 8- or 16-bit digitised sound, but will produce FM synthesised music when running the Sound Blaster 16 Diagnostic Utility, DIAGNOSE.EXE.

I purchased the card as a Sound Blaster bundle including a Creative CD-ROM drive, type CR563, in August 1994, and initially installed in a clone 386DX machine with a 120Mb HDD and 4Mb of RAM.

The video was not brilliant and I could not get any sound out of the bundled Grolier Encyclopedia, (which is OK incidentally; I've tried it on another multimedia machine).

In March this year I purchased an Osborne Pentium 60 and installed the card in this machine. It improved the video output but there was the same problem with the sound — 8- or 16-bit digitised sound. I have tried 48 permutations of IRQ2, 5, 7 and 10; Low DMA of 0, 1 and 3; and High DMA of "use low", 5, 6 and 7.

In desperation, I have also tried the four different audio Base I/O addresses and two MPU-401 UART Base I/O addresses, all without success.

Presently the card is set up as:

Audio Base I/O Address: 220H

MPU-401 UART Base I/O Address: 330H

Interrupt: 10

Low DMA channel: 1

High DMA channel: 5

I enclose a copy of my AUTOEXEC.BAT, CONFIG.SYS, MSD.EXE, WIN and SYSTEM.INI files.

— *Chris Hakkennes, Benalla, Vic*

A I can find no sign of conflict in your system files, and you've tried all possible settings. Anyway, when there's a conflict, you'll usually have some sound, though it'll be scratchy and intermittent. When there is no conflict, a sound card will fail to work for one of two reasons: the driver software or setup is faulty, or the card is faulty. I assume you took the card back to the dealer for testing under warranty early in the piece, so we can rule out a fault in the card. It would be easy to test — you only need to plug the card into a system that is already working correctly with the same model of card.

If so, that leaves a software fault. As far as I can tell from your system files, all drivers are correctly installed, and if one of the driver files were missing you'd get an error message. It's interesting to note here that all the little Windows frills are in place, which means that Windows has accepted the sound system as functional. That is, Windows has tested and found that the hardware is present and correctly installed with all drivers.

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There remains a faint possibility that one of the driver files could be corrupted in a small way, such that it runs but delivers no sound, but it would really surprise me. I'd want to test that card before I did anything else, especially as the Sound Blaster diagnostic utility fails to make it play.

I'm surprised you mention video: this card has nothing to do with video playback quality, only sound. The video is in the capable hands of your #9 Trio64 VESA display adaptor.

32-bit challenged again

Q I am having problems with trying to get Windows 3.11 to use 32-bit disk access. I used to have only one 340Mb Maxtor HDD, but recently added a second 540Mb Maxtor HDD. Taking this opportunity, I reinstalled all my software organising it across the two drives.

The new 540Mb Maxtor is now drive C: and I use it for the operating system and all my major applications. After selecting 32-bit disk access, Windows will not boot. Two error messages appear, seemingly randomly. "Insufficient memory or address space to initialise Windows in 386 enhanced mode", and "EMM386 error #03 in memory space 00B8:0050". As 32-bit file access works, what sort of performance gains will 32-bit disk access give? Please help me.

— Derek Trau, Miranda, NSW

A Your problems seem to be in the same basket with Shaughan Syme's in this section. There are clearly difficulties with 32-bit disk access on large drives, but 32-bit file access still works. This is because 32-bit file access is in reality a cache program (sort of like SmartDrive), while 32-bit disk access refers to a protected-mode hardware driver. If it can't be used, Windows simulates it with the so-called "real-mode mapper" RMM.D32. This is a little slower, but even in this mode, 32-bit file access will run your disks faster than SmartDrive.

... and again

Q Congratulations on having the most interesting section that I have read in any PC magazine. Your July 1995 Help Screen was particularly timely as two of your contributors raised a topic that occupied a fair amount of my time over the last week — installing a hard disk with a capacity of more than 528Mb. I have a Compucon 386DX-40 with 4Mb RAM and, originally, a Seagate 3120A 107Mb hard disk. The new disk is a Seagate ST3660A 545Mb, part number 95802-405. This is significant because this part comes with special installation software, which bypasses the BIOS drive size limitation, already loaded.

Stephen Heusz of Killingworth apparently went

through a very similar exercise, except that I chose not to partition my disk, and he obviously came to the same decision point as I did with the DOS Setup disk. I use DOS 5.0, but the behaviour seems to be the same. The Seagate hard disk manual is not clear on what you do next, so here our paths diverged, and I selected the option which expands the DOS files onto floppies (four, in my case), created a C:\DOS subdirectory, and copied all the expanded files to this subdirectory. This worked perfectly, somewhat to my surprise!

This is also relevant to Paul Chang's problem. This incident seems to be another one worthy of your "Botched Installation by Dealers Who Should Know Better" file. According to the Seagate manual, the limitation is actually the BIOS, which cannot handle more than 1,024 cylinders. The EZ Drive software is the installation software that came with my Seagate disk, and, as noted above, when installed properly as part of the boot sector (I assume that is where it goes), it bypasses the BIOS limitation during bootup. One point here: the Seagate manual specifically states that its version of EZ is tailored for the Seagate drive and will not work with any other. For interest, I also lost about 4K of conventional memory (the manual warns of this), but after fiddling with the system I now have a Largest Executable Program Size of 608.5K, and could probably do better if I tried.

Some other points. SmartDrive double buffering is automatically installed during the Windows 3.1 setup if SmartDrive cannot determine that it is not necessary. This doubt is caused by the change to the bootup system. I don't know if this applies to Windows 3.11, or indeed if the double buffering is necessary with my installation. I am using it, just in case.

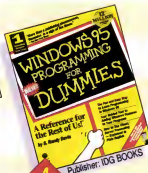
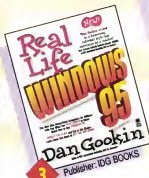
The Seagate hard disk manual contains specific instructions on how to remove the EZ Drive boot information. It seems that Paul Chang's dealer botched not only the installation but also the fixing of it. The manual also contains specific instructions on how to use FDISK to change the partitioning after the EZ Drive software is installed. The manual notes that the drive size limitation can also be solved by using a different disk controller, or upgraded BIOS.

Finally, Dave Kelly asks for a good text on Windows. On a recent trip to the US I picked up a copy of *The Windows 3.1 Bible* by Fred Davis (Peachpit Press, 2414 Sixth St, Berkeley, California), which came with a CD of the book plus lots of interesting utilities, etc. To someone of my neophyte status this book is marvellous.

— Nigel Spurling, via Bungendore, NSW

Editor's comment: Well done, Nigel. We're getting EZ pretty well pinned down. And you know what — I'm so glad Windows 95 will make all this disk size nonsense a thing of the past. ■

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Away from little fingers

Q You have previously provided an answer for me regarding childproofing my SOHO PC. One solution was quite feasible, but for one reason and another I have found it unsuitable.

I now wish to ask, in regard to this problem and in general, about hard disk partitioning. I have read about how to do it but I would appreciate any tips as to good and bad points.

I have (and presently only need) a smallish hard disk (120Mb with 47Mb free). Is it possible or practical to run Windows applications on two drives? How might each be accessed; one the easy way and the other more difficult?

My kids are only young and are not yet capable of using File Manager but can mess things up by clicking in the screen randomly. Junior knows to type WIN at the DOS prompt, and then accesses Paintbrush, games and educational programs (DOS and Windows) from a Program Manager Group. The kids are capable of being taught a few simple keyboard commands. I would consider leaving Write and a few other applications on their drive, as I would use ClarisWorks and specific applications on my drive.

Hopefully by the time they are more capable, they will have attained some responsibility and all this will be of little concern. We will all then probably be using another operating system anyway.

PS: Is there some way of stopping the CPU clock falling behind?

— Bill Bradley, Bellevue Hill, NSW

A The bad news is that the solution I gave you before is the only one I have. The good news is that Windows 95 solves the problem with great ease. Windows 95 allows you to set up several sets of user preferences and password protect each one. You can thus configure a complete desktop for the kids that contains only what you want them to access, then freeze it and password protect your own setup.

Dividing the hard disk or using two disks is really no help in this connection, because you can't lock away an entire drive. There's no difficulty about running Windows applications from different logical drives, though, so you could easily use this device to ease the problems of organising the system. Considering the amounts of space gobbled by games, it might be an idea to kill two birds with one stone and apply DoubleSpace or Stacker.

DoubleSpace and Stacker work the same way in that either system always makes two logical drives out of each one you apply it to — one compressed and one uncompressed. If you create, say, a nominal 60Mb compressed drive for the kids, it'll leave 90Mb uncom-

pressed for yourself and Windows's swapfile.

As for the CPU clock, there is a shareware program called Fixtime. It works in a very simple but effective way; it just measures the error of your system clock and applies a correction every time you switch on.

Macro, schmacro

Q Again I appear with a couple of problems, with which I am sure (judging from past experience) you can help — please!

1. I have recently acquired a fax modem, and have a Bitware icon in Windows which, when double-clicked, opens a toolbar. A click on the Bitcom button opens a Bitcom for Windows screen, and a click on the Ring button rings my bulletin board.

I made a Macro recording of the above actions with a shortcut key (<Alt>+), but all I get when using the shortcut is a beep and no action. If, however, I open the recorder window, select the macro from the File menu and then click on Run in the Macro drop-down, it works. Then, after the Ring button has been activated, I cancel the ringing and return to Program Manager with a couple of <Alt>+<F4>s — the shortcut key now works perfectly! It continues to do so even after using another Windows-based program such as MS-Works. Have you any suggestions please?

2. The second item is quite minor but it would be nice to overcome it. If I go straight to Works from C:\> and use <Alt>+<Tab>, I get a full sized Program Manager. If I use <Alt>+<F4> instead, I get Program Manager iconised and need to press <Alt>+<F4> twice more before I get the Exit window. When I first get the icon (after one <Alt>+<F4>) I can maximise Program Manager with <Alt>+<Tab>. Peculiar!

In two of your recent Help Screens — the first and finest section on my reading agenda — I noticed a couple of questions with which I would like to offer some assistance.

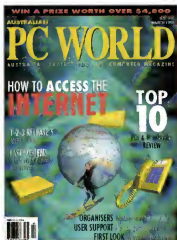
A correspondent was asking about the limit of 127 characters in the Path entry in AUTOEXEC.BAT. If he adds the line SET PATH=(followed by the Path) in the CONFIG.SYS file, there is no limitation on the length. Naturally, the Path statement in AUTOEXEC.BAT should be removed. There is one small snag that is easily overcome. Sometimes, when adding an additional item to the path, it tends to drop down a line, leaving just the word SET in its old line.

The simple cure for this is to press <Home> followed by <Backspace>. When this is used don't forget to reinsert the space between Set and Path ▷

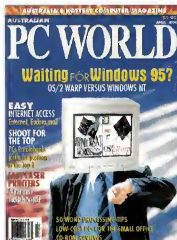
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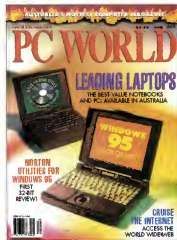
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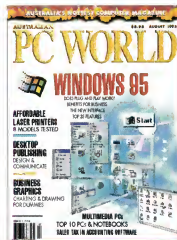
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which will have disappeared. Another correspondent was inquiring about shortcut keys for umlauts. Here are a couple of very useful shortcuts I have installed. Corresponding with my daughter in England I often discuss the stuff they call weather. This includes boasting about our own weather and typing temperatures.

I have set the shortcut key <Alt>+<O> to load the superscript command, and all I have to do to produce the degrees sign is to press <O> three times, holding down the Alt key on the first and third times.

Another useful shortcut is to assign <Alt>+<4> (the key containing the \$) to produce the English £. Just press <Shift>+<4> for dollars and <Alt>+<4> for the pound sign.

Printing an envelope in Word involves opening the Toolbar, clicking on Envelopes and Labels and again on Print in the window that opens. I have recorded a macro of all these actions and allotted the shortcut <Alt>+<E> (for envelopes). This gives me immediate printing and I don't even see the window.

Hope the above proves useful.

— Reg Manus, Willetton, WA

A In order for a Windows Recorder macro to work, Recorder has to be running and the particular file that contains the macro has to be loaded. The easiest way to handle this is to record all macros in the one file, and drag that file into the Startup group. After you do this, select the icon in the Startup group and press <Alt>+<Enter>. This opens the Properties dialogue box for the icon. Check *Run Minimised*. From now on, all your Recorder macros will work all the time — provided that the objects they operate on are available at the time, of course.

There's another little difficulty with the Recorder that I should warn you about: a macro is unreliable if you use the mouse in recording it. This is because the mouse works with what is visible on the screen. If it needs an object that happens to be concealed behind something else this time, the macro will crash. So if you want good, reliable macros, record everything with keystrokes. Everything can be done without the mouse, as you'll find if you look closely at the window control menu and other menus, not to mention the manual.

The thing to remember about <Alt>+<F4> is that it doesn't just shut down Windows, it shuts down one application at a time first, even if they're minimised. Some major applications even shut down whatever document is open before going on to shut down themselves.

Now, that idea of putting the PATH statement in CONFIG.SYS rather than AUTOEXEC.BAT looks pretty amazing. I have found no mention of it anywhere in the literature I have access to, but it works. I'd love to know where you picked it up!

The official way to deal with the problem of insufficient environment space is to include SHELL=

C:\COMMAND.COM /E:512 in your CONFIG.SYS. This sets your environment space to 512 bytes (default is 256), or whatever you specify at the /E: switch.

Thanks for your tips, they're very handy. Let me just point out for the benefit of other readers that the last two refer to WinWord macros. By the way, you can simplify the "degrees" one — record a macro while you do the whole sequence *superscript* - "o" - *back to normal*. This lets you enter the degree symbol with a single keystroke.

Back up where?

Q I have a problem that I hope you can help me with. In December last I purchased a program called My Backup by My Software in the US. After using it for a short time, usually between eight and 30 1.44Mb floppies, it will, for no apparent reason, exit Windows and return to the DOS prompt. When Windows is restarted, it shows the error message:

Sound Blaster 16 Error

Incorrect MIDI/PORT setting in the SYSTEM.INI file

On inspection of this file, it is found in [drivers] to have changed from Wave=SB16SND.DVR to Wave=MVSPEAKR.DVR, and this is accompanied with distorted sound from the computer speaker and not the stereo speakers. On approach to the local distributors, they in turn referred the problem back to the USA. The suggestion was to reinstall the Sound Blaster program. This I did, but the problem still existed. I then asked one of the local computer experts and he suggested reinstalling Windows from the original disks, again with no solution to the problem. I have included the print-out from Microsoft Diagnostics and hope you can offer some suggestion while I still have some hair left.

— Gordon Maxwell, Merrylands, NSW

A As my hairless old mate, Sherlock Holmes, liked to say, once you have eliminated the impossible, whatever is left is the solution, however far-fetched. In this case, if you have the right Sound Blaster driver before running the backup program and the wrong one after, I have to conclude that the backup program takes it on itself to load MVSPEAKR, which is a grotty old sound card substitute dating back to when sound cards were too expensive for hobbyists.

The makers of My Backup may not even know about it. When several programmers re-use program modules created by other programmers for other purposes, you may well get a module that does something really silly only under certain rare circumstances, which is very hard to pick up in debugging.

You don't mention this, but I assume this backup program is a Windows-based one that makes noises to indicate what's happening, and after a while it comes to the routine that installs the wrong driver, which is when Sound Blaster complains.

I can suggest a way to put this theory to the

test. Use *File-Find* in File Manager to search for MV-SPEAKR.* throughout your system (using the wildcard because the installer may rename the source file). If you find any files with this search, delete or rename them. If you now reinstall your Sound Blaster card and run the backup program, you could have three results:

1. The same thing as before happens, in which case I've paddled up the wrong creek again and it's not the backup program that offends.

2. The backup goes smoothly and your Sound Blaster sings like a canary. Grin and heave a sigh of relief.

3. The backup program halts and complains that it can't find the sound driver it wants to install. If this happens, get rid of the backup program. The freebie one (limited to floppy backup) that comes with MS-DOS is very good, anyway.

I see from your system files that you don't have the freebie delete protection installed or anyway activated, so maybe you're not aware that MS-DOS 6.2 comes with Windows utilities for backup, undelete and antivirus. They're easy to install. Put disk 1 of your MS-DOS 6.2 set into drive A:, log on and type *setup /e*. This tells the setup program that you want to install the utilities. You'll be asked if you want the DOS and/or Windows versions — I recommend choosing *Windows Only*. When the installation is finished, you'll be able to access the utilities through the File Manager toolbar and menu.

Who goes there?

Q I have a problem that I hope you will be able to solve for me. The problem resides in Windows 3.1, namely the username and company name section when loading software from a server to workstation. What we have done is copied each program disk into one directory, so that we load Windows onto a workstation from the server by typing *s:[directory]\setup*. The problem occurs when you get to the section of filling in username and company name — only the username comes up and the company name fill-in box is not there.

— David Harper, Sydney

A A network installation assumes that the company name is the same throughout the network, which makes sense. What's happened in your case is that the person doing the server installation entered the company name instead of the user name and left the company name blank.

I have no personal experience of a server installation, so I can't tell you the file where the information resides or whether it's encoded. If you have the Norton Utilities, PC Tools or the like, you can try searching the server's Windows directory (and sub-directories) for a file that contains the string that occupies the user name line, but this method has thorns — there may be several files containing this information,

including one or more where it's encoded so you can't find it. The only cure I know that works for sure is to delete and reinstall Windows on the server and fill in the data correctly when prompted. Sorry!

Hairless Paintbrush

Q Could you help me solve a problem in Windows 3.1 Paintbrush? (The procedures in *italics*, below, is the only one I don't know how to do.) I would like to:

- draw a thick line
- make a copy of the line
- change the colour of the copy
- change line thickness of the copy to 1/2 that of original
- paste copy back on top of original

The purpose of this exercise is to draw a street map. The thin copy pasted onto an original will give a professional look to small maps. I have seen this technique using Paintbrush described in an Australian computer magazine within the last two years, and I'll be blown if I can remember the technique or the magazine. Could you please tell me how to execute the procedure in *italics*.

— Bernie Bloedorn, Alice Springs, NT

A I'm afraid Paintbrush is a little primitive for this sort of job. Mainly, there is no way to change the width of a line once it's been drawn other than deleting pixel by pixel. You can't even copy a line as such, because once Paintbrush has finished a line it becomes part of the background — it's a bitmapped drawing program that stores the image as individual pixels. When you copy in Paintbrush, you copy the selected area regardless of what's in it. This is easy enough with straight objects, but your road had better not have any curves in it.

What you can do to achieve the effect you mention is to draw a narrow filled rectangle, selecting a nice thick border. Select the border colour with the right mouse button but remember to change it back to white if you want to move the rectangle, because otherwise the area where it was will take on the border colour. Unfortunately, this limits you to straight lines, which isn't much good.

What you really need for this sort of work is a vector-based drawing program, where each object you draw retains its identity and can be moved, rotated and edited at any time.

The good news is that you can get one without frightening your bank manager. Micrografx has a package called Graphics Works that gives you an excellent basic vector drawing program, a bitmapped program that knocks spots off Paintbrush and even handles Kodak PhotoCD images, a couple of specialised graphics items (flow charter and org charter, if my memory serves), and a fine collection of TrueType fonts. Ring Micrografx on (02) 415 2642 if your local store doesn't have it. ■

The cavalry is here

I would like to offer my assistance to two of your readers who reported problems in July's Hardware Q&A in your excellent magazine.

Firstly to Ben Skeates of Mt Isa: I bought a very similar machine to his in July 1993 and it displayed the identical problem that he describes, plus some others to do with the video card. I found All Data, through its newly-opened office in Parramatta in Sydney, to be very helpful, however. The problem was with the Windows video drivers, and by simply updating them the problem disappeared. I include a disk with the upgraded drivers on it for you to forward to him.

To install them all he has to do is run the INSTALL.EXE file from within Windows, and follow the instructions. It will probably be helpful if he deletes the old drivers from his \WINDOWS\SYSTEM\ directory after he has done this. They can be distinguished from the new drivers by their dates, the new drivers being dated 9/05/94.

Secondly to Paul Chang of Kew: I assume his hard drive is manufactured by Seagate, as I have just purchased one of their Decathlon range and it came with installation software called EZ-Drive.

When it installs it modifies the master boot record on the hard disk so it can bypass the system BIOS. To boot from a floppy disk you have to hold the control key down at a special time or the computer won't recognise the new master boot record.

To disable EZ-Drive he should put a bootable floppy disk in his A drive and re-boot the computer without using the special procedure, then put in a disk containing FDISK.EXE and type `fdisk/mbr` at the A: prompt. This will reinstate the DOS master boot record without repartitioning the disk and, according to the documentation, will not affect any installed files. He will, however, only be able to use the first 528Mb.

I found your method of circumventing the 528Mb barrier interesting, and while I would be the last to contradict anything you say, it was my

experience with the drive that even when I created a primary partition of, say, 400Mb, FDISK would still only allow me a further 128Mb for the extended partition, even though my CMOS correctly reported the drive as having 815Mb available.

I solved the problem by purchasing an Enhanced IDE controller (Promise 2300 VLB), which allows the new Mode 4 drive to sizzle with a data transfer rate of better than 16Mb/sec, and average seek time of 8.3ms, according to Norton Utilities 8. This compares more than favourably with my two-year-old Quantum Pro LPS drive with a data transfer rate of 2.5Mb/sec, and an average seek time of 15ms (I fully expect that their recent drives are competitive with the Seagate).

Now, perhaps you or one of your readers could help me? At present I am using a video card with a Tseng Labs ET4000/W32i chip with 2Mb of RAM that came in a very colourful box labelled Viewtop. I would dearly love to get some updated video drivers for it, as the ones that were supplied, dated 1/12/93, do funny things to my display when I switch from Windows to a DOS-based screen. Do you have any ideas where I might obtain them from? Thankyou again for a very informative magazine.

— Billie Fuller, Torquay, Qld

Editor's comment: Don't hesitate for a moment to contradict me, Billie. At best, I'm fumbling around in the dark when it comes to hardware. You're absolutely right about the enhanced IDE. When I tried the method it didn't enter my head to wonder what controller card the machine happened to have. It's readers like you who make this column worthwhile — thanks a lot and keep up the good work!

As for your display adaptor with the Tseng Labs chip set, one knowledgeable distributor is TWC on (02) 749 1166. That's pretty good news, but better news yet is at hand: Windows 95 has a built-in 32-bit driver for that chip, and if the driver provided for my ATI card is any guide, it'll really fly. So when you get a chance to upgrade, you'll be in clover. ■

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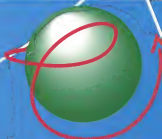
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New Web page tool makes designing pages easy



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Vote on the pages of your choice. Nominate new ones.
Trade URLs with the Ice Kween.



Welcome to the premier issue
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IDG's monthly
magazine appearing as a
supplement to our 6 major titles,

Computerworld

PC World

Network World

Macworld

Computer Living

&

Reseller.

Circulation exceeds 95,000:
Australia's largest circulating
guide to the internet and the
world wide web.

Service providers jostle for position

Pressure on Internet service providers from The Microsoft Network could bring down prices, according to industry observers.

So far IBM has been the only company capable of offering national access to the Internet for a base rate of less than \$5 per hour.

There are still many small operators charging a flat fee of less than \$100 per year but this is likely to change now that Telstra has taken over the administration of the Internet in Australia.

This time one year ago, there were less than five thousand people using Web browsers in Australia and there were only a handful of Web sites.

Now, AusNet, and Reed books' EduNet are offering a free account to the Internet for schools, and Optus Vision has promised to install cable to the door of the school free of charge.

While Microsoft and computer companies such as Compaq are working hard to bring the school



population up to date with the latest hardware and software there are still many DOS and Apple II machines in operation through the schools.

The Internet has the advantage that it can be accessed from any of these platforms. "MSN requires expensive equipment that many people do not have," said Peter Setori of AusNet.

For some users the choice is clear. "Why would you leave a sprawling untidy environment with heaps of stuff, for a squeaky clean one without much going on?" asked Paul Kay of Erskineville in NSW.

Sausage Software puts the sizzle on HotMetal

A company situated at <http://www.sausage.com> is taking the world by storm with its new HTML editor, Hot Dog. The program is still under development. A professional version is on the drawing boards but not available for release, though a beta version can be purchased for \$69.



The software leaves older shareware HTML editors such as HotMetal for dead. It provides a number of templates, and allows the user to control most aspects of Web page design.

Unlike most of the commercial products in the market, Hot Dog is completely up to date with the advanced features of World Wide Web browsers such as Netscape and others proposed for HTML 3.0.

Even in the beta release that we tested before writing this article, Hot Dog supported tables, backgrounds, sized graphics and other features not available in any of the commercial products. It offers dialogue boxes to guide you through creation of more complex code, checks for duplication and allows for drag and drop from the Windows file manager.

Available through Sausage Software in Melbourne's Briar Hill, the product has been receiving rave reviews on the Net. Keep your eye on au.world for further updates on the best of the Web editing tools.

The most likely outcome appears to be that the Microsoft Network becomes an extension of the Internet. It will have Web access in November and already offers e-mail and Usenet to subscribers. — IAN EDWARDS

INTERNET SHOWS ABOUND

The Internet World conference just completed last month at Sydney's Darling Harbour was one of many which will take place over the rest of this year.

Key speakers included the ubiquitous duo Geoff Huston of the Internet Society and Gerry Davis of On Australia — it wouldn't be an on-line conference without one of them there — and speakers from overseas.

One of the strongest features of the conference was the amount of information about the Internet in the region. Many of these conferences talk globally but have the US or Australia as their focus.

PC95 in Melbourne last month had an Internet theme as well. The *au.world* editorial team was involved in a project with the organisers, called The Show Wide Web.

Visitors to the show were introduced to *au.world*, and the show, through giant orange eggs — actually Olivetti information kiosks. The kiosks were also used to demonstrate certain networking applications such as Internet Relay Chat.

This month, the Australian Unix User's Group will host the Asia Pacific World Wide Web conference. The five-day event includes two days of tutorials and three of speakers on topics from the theory of cryptography to working from home. Anyone interested in more details should contact Australian Convention Management Services on (02) 332 4622.



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sex & sin

Almost as long as the Internet has been in the news so has the issue of pornography on the Internet. Before that it was the turn of computer games

Parents and teachers understandably fear the new and the unknown. One of the things concerning parents about the Internet is that kids seem to understand it better than their elders. This makes it very difficult to advise or instruct.

Certainly the stories have been fairly horrific. During the NSW election campaign in March this year, Sydney's morning broadsheet, *The Sydney Morning Herald*, ran a top of page one story claiming that a Swedish researcher had downloaded thousands of smutty images in a week.

This one story was enough to tone down the now Premier's election promise that an incoming Labor Government would provide Internet access to all schools.

In June many of the nation's nightly news services simultaneously picked up a story that had surfaced in Los Angeles two weeks before.

A man posing as a pen pal had arranged a meeting and abducted a young Internet user. Suddenly, stories were rife.

Kids blew themselves up with homemade bombs, using recipes from the Internet. Detailed instructions of how to conduct a rape were reported to be available on the Internet but no-one could find them. The list of horrors grew.

In July, the cover story of *Time* worldwide was Cyberporn. That article also quoted research figures "proving" that there were thousands of pornographers operating on the Net and implying that pornography was one of the most popular subjects in the world. The usual figures of hundreds of thousands of people visiting

Playboy, *Penthouse* and *Hustler* magazines were given.

The article provoked an immediate and angry response from the Internet community. Almost universally they condemned it as biased, unrepresentative and poorly researched.

On the whole this response was championed by the Electronic Frontier Foundation <http://www.eff.org> and other groups of US civil liberty groups who saw the article as playing into the hands of the arch-conservatives. <http://www.panix.com/vtw/exon/> is a related page that outlines the case against the Bill for Common Decency.

In the end the criticism was so vocal that almost everybody shied away from claiming responsibility. The *Economist* and *The New York Times* ran substantial exposés of how badly the story was written.

In a long interview with HotWired <http://www.hotwired.com/special/pomscare/> the author, Elmer Dewitt, claimed that the story was taken out of his hands and he, too, had been misrepresented.

"I remember saying we're gonna be killed from both sides for this. The civil libertarians are going to be furious

that we're apparently giving ammunition to the conservatives, and the conservatives are going to be furious that we're even discussing — that we're giving national prominence to these weird sexual things that are appearing on the Net — or at least on adult bulletin boards."



HotWired mocked up a Time cover about the story behind the story

SIN

In the end there was no-one except *Time* management to stand behind the story. The pornography turned out to be on bulletin boards, the research methodology meaningless and the author was not prepared to stand by what he had written.

Like all the other stories, though, it made ordinary people worry about what their offspring were doing on the computer day and night.

And the truth of the matter is that there is material on the Internet that most parents would not approve of.

Let's put that in perspective. There are the same sort of magazines, *Penthouse* et al, on the World Wide Web as there are in a newsagency.

In the side alleys and back streets of the Internet there are some fly-by-night operators peddling real smut, but you have to chase them around because their sites move all the time.

There are plenty of clubs and meeting spots on the Internet where people with particular sexual preferences go to "meet" and chat each other up. These have all the charm and offensiveness of your average suburban public toilet.

There are also lots of silly sites like Vanessa's School for Boys who want to be Girls, and some more and less serious sexuality sites, like an American Woman's View of Bangkok's Sex Industry.

All in all, the range is pretty much what you find in the rest of the world. Whether or not your child's exposure to this material is likely to happen accidentally on the Internet is a moot point.

It certainly seems melodramatic to ban Internet access so that someone does not accidentally have their mind corrupted.

Cashing in on the fear of an avalanche of sex, or rising to meet the need of a concerned community, a number of commercial products have been released that allow parents, teachers and employers to limit the user's access to various sites.

Net Nanny appears to be more tuned to operating as a word filter, preventing certain words from being entered, sent or received. This gives it the ability to avoid known sites by using their address as a banned word.

SurfWatch, on the other hand, is an IP filter. It will not communicate with a banned site. Both products have pre-installed settings and can be updated by visiting the home page of the software vendor.

The addresses for these pages are supplied opposite.

One of the most interesting phenomena surrounding this issue is the appearance of self-help groups supporting those who feel they have a pornography habit, or addiction. These, and related recovery groups for the sexually abused show the Internet at its best. A community of people reaching out across the global networks to help one another.

One of the characteristics of these groups is that they are generally based on Alcoholics Anonymous and follow fairly traditional Christian rhetoric. Certainly they encourage the obsessive masturbator to think of their habit as a sin. Fortunately a couple of them are based on psychiatry rather than religion.

Jim Carroll <http://www.com/interface/carroll.html> wrote an impassioned on-line response to *The Economist* article about the whole tawdry affair.

The solution? The other day I encountered my first neo-Nazi on the Net, a madman spouting hate.

You know what happened? A bunch of Internet citizens ran him out of town. Chased him away. Sent him packing. Gave him the old heave-ho.

I saw Internet providers refuse to sell him an account. I saw a community galvanised into action. The solution is staring you in the face. It is the Internet itself.

In keeping with this sentiment a group formed to discuss Children Accessing Controversial Information has set up a mailing list on the net. To subscribe: Send an e-mail to: caci-request@cygnus.com. The body of the message should say: **subscribe**. Or visit <http://www.zen.org/~brendan/caci.html>.

Most parents would find themselves in good company here.

Relevant sites for those concerned by their kids' access to 'filth' on the 'net

<http://www.stolaf.edu/people/bierlein/noxxx/noxxx.html>

Personal help for those struggling with an obsession

<http://www.casti.com/NMV/html/nmv.html> The home page of a group dedicated to ending sexual violence

<http://www.primenet.com/~elvis/porn.html> 'Elvis' is a man who confessed to his 'sins' on the net, and thirty responses from men struggling with their own obsessions

<http://www.hotwired.com/special/pornscare/> The HotWired site that brought it to a head in July

<http://www.com/interface/carroll.html> is the home page of Jim Carroll, an Internet author against censorship

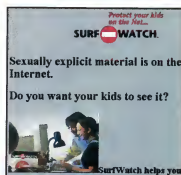
<http://www.surfwatch.com/surfwatch/why.html>

<http://www.netnanny.com/netnanny/product.html> The two commercial products cashing in on the attention

<http://www.eff.org/CAF/cafiuic.html#foursearch> Account by the Electronic Frontier Foundation on US library policies as to holding material not suitable for kids in the library



Net Nanny provides a word filter and control centre for your PC



Surfwatch works by banning certain sites



*Tell us
what you
want to
know*

Whether you are aware of it or not, the world is changing. Computers will soon affect all areas of life in a way that most of us have known was coming but could not predict what it would be like.

The local pub is now taking transactions for the bank, taxi drivers communicate with base via a bulletin board with a menu system, forklift drivers use sophisticated pen pads to check off pick lists in high-tech warehouses.

Imagine that working in the main street of a country town 100 years ago.

Occasionally a motorised cart would happen by, shattering the peace and entertaining everybody with its preposterous noise and jerky progress.

You would have been glad to have a decent horse.

By the 1950s, however, everyone in the main street of that country town wanted a car. They had been called motor cars, automobiles, motors and more but now they were plain old "cars" and everybody needed one.

The motor vehicle industry had been born and the horse became a symbol of the past.

This is what is happening to information technology right now. The bits and pieces of "infotech" are now commodity goods that you can buy in any shopping mall.

With a computer, a modem and a telephone line you can go anywhere in the world, talking to people you would not have known existed if it was not for the modern computer networks.

This might simply seem like a fascinating fact, but it has serious implications for us in our daily lives.

As a society we have spent the last 40 years organising huge amounts of information, collating it, copying it and comprehending it.

The bulk of the jobs for the last

Use us, help you

50 years have not been in agriculture or industry but in offices. Now we are going to automate office work and use the free time to begin communicating.

In case you think there is something facetious about this, consider the amount of business re-engineering that has gone on in that last 10 years and the number of people who are out of work as a result.

And why? So that companies can be more efficient. Many companies are now little more than a very sophisticated computer system; huge factories and warehouses and networks of business relationships.

Think about how a franchised organisation like Seven Eleven works and you will see what I mean.

The way that individuals will survive in this new environment is by being connected. Small companies, run from home, will connect into these networks and perform specific services on behalf of these computerised organisations.

au.world is a bit like a survival kit in a surging sea. As the world around us changes, we set out to explore and navigate, plotting a course that you can safely follow. The magazine you hold in your hands is the monthly map we produce from our journeys. It is really nothing more than the logbook

from the flight deck. If you want to join as we travel, connect to us via the networks.

Our first point of live contact is via the Internet. We will be available through a range of other services, such as bulletin boards and the Microsoft Network, as we get wired.

Help us explore this new world and tell us what you want to know via <http://www.idg.com.au/au.world>, or e-mail au.world@idg.com.au. Who knows, we might see you in a future issue.

— GEOFF EBBS

competition

On page 14 of this issue you will find some of the most popular and most obscure sites on the World Wide Web. They have nothing to do with your day job, but they do give you some new spots to surf.

You can turn this mis-spent time into profit as well. Visit the *au.world* site at <http://www.idg.com.au/au.world>. Vote on the IceKween's selections of Fire and Ice, nominate your hottest and Kewlest sites.

Should she choose to put one of your suggestions up on her page, and you were the first person to send her there, you will win a free copy of the new Windows or Macintosh edition of the best-selling title, *The Australian Internet Book*. Enter now, only on-line.

A call for Nominations

Good IT professionals deserve recognition. Please help us give it to them!

Computerworld is now calling for nominations for the 1995 Computerworld Fellows Awards. We're seeking Australians who have combined their imagination and drive with innovative computer technology.

The Computerworld Fellows Awards honour people judged to have used information technology to advance Australia and to benefit society. Over the past eleven years, more than 30 people have received this prestigious award.

You may be one of the people we are looking for. Or you could know of someone whose work you feel should be publicly acknowledged. If so, we'd certainly like to hear from you.

Nominees could come from a wide variety of fields: government, business, science, medicine, education, engineering, agriculture, environment, transport, the arts, finance or the media.

Do you know of someone who has led a project that helped:

- improve our environment?
- made one of our nation's industries more competitive?
- empowered Australians to learn more effectively?
- streamlined patient care?

The possibilities are endless. And they are all around us. All we need is your help in nominating worthy candidates.

In November, we will publish a story on each Fellow's contribution in *Computerworld*, and later present them with a citation at a special gala evening ceremony.

To obtain a nomination form, simply fax the coupon below to Kate Bauer on (02) 439 5512, or phone her on (02) 439 5133. Nominations close Tuesday, 31 October, 1995.

Yes, I would like to nominate someone for a 1995 Computerworld Fellows Award. Please send me a nomination form.

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The POWER OF BEING ONLINE



The Internet is now the battleground for the major media players. Traditional magazines are appearing 'on-line'

There is no doubt that 1995 has been the year Australia found out what 'connected' means.

Optus Vision announced comprehensive plans, Galaxy pay television rolled out for those with line of site to Australia's tallest buildings and Fairfax quietly set about buying information services and connections to Telstra's television delivery backbone.

For most of us, the idea of pay television does not hold that many surprises. We have seen Sky in the local, and we know vicariously a "cabled" America through broadcast shows such as *The Simpsons*.

The global computer networks, however, have risen to prominence in a most surprising manner.

The power . . .

The Internet makes it into the news regularly, and the news is published there every minute of the day.

The Microsoft Network has been one of the hottest political issues for people involved in education, communication and the computer industry.

The Microsoft Network followed Apple's eWorld service which uses an interface based on a powerful metaphor, the "real world". Apple is so keen to sell this service separately from its computer products it has announced that it will be available to people not using Apple hardware or software.

These computer networks are, many people believe, the beginning of global systems that will integrate the telephone, television and business networks.

Describing Novell's global strategy in Sydney recently, Robert J Frankenberg, CEO of the networking giant, said

"[Our new technology] provides the ability to connect virtually any device with a microprocessor to the network. This includes vending machines, gaming machines, phones, television sets and even automobiles."

This is in line with Microsoft's Windows Everywhere strategy, announced by Bill Gates in 1993.

Microsoft product manager for interactive television Philip Meyer described Microsoft's interest as supplying the operating system that connects all these devices together.

"We want people to be able to buy very cheap, standard "set top" boxes which give them access to a wide range of content provided by media groups. Microsoft is not really interested in becoming a publisher," he said.

He accepts that there is a difference between the private and intense activity of using a computer and the shared activity of watching television. There are many activities, though, which are suitable for either environment. "You might want to have a broadcast service, such as the cricket, on screen while you work with your spreadsheet; or you might want to engage in an interactive intense experience, such as on-line shopping with the whole family," he said.

Geoff Huston, secretary of the Internet Society and technical manager of Telstra Internet, told *au.world* that convergence is a "myth", promoted by people with a vested interest in centralising media.

"Television, newspapers and books are instances of the fact that printing one and delivering it to each member of the audience is expensive," he points out. The power of on-line services is to change that fundamentally.

He claims that most on-line service providers are now attempting to keep the user in the role of consumer.

of being . . .

"It will fail, though," he laughed confidently. "With a \$2,000 computer and \$200 for telephone connection I have everything I need. I can communicate, produce and publish without anybody else's help. There is no way anyone can control me," he concluded, saying that in this environment people will base their relationships on trust.

He believes that in a point to point system such as the Internet, the media magnate is impotent. There is no role for a middle man, he said.

A number of small software companies have demonstrated the viability of Huston's vision. Australia's Trumpet Software with its Trumpet Winsock, and QualComm with the Eudora mail package, have successfully used on-line word of mouth to grow successfully.

While the popular Web browser, Netscape, has had serious momentum behind it, its success is underpinned by electronic distribution.

It is not just commerce that will be changed by on-line services,



With Rupert Murdoch and Bill Gates the major global forces in the arena, Australia has been hard put to find a national voice on the issues of its rights in cyberspace

according to Huston. "This is the end of the nation-state," he asserts. "What does it mean to have loyalty to a government or city if my relationships of trust span the globe?"

While taking a less philosophical viewpoint, Australia's Internet service providers wholeheartedly hope that Huston is right. Some of them are pioneering entrepreneurs, who have betted their businesses on mapping out and developing this new frontier. Peter Setori of AusNet, the company that brings you Internet Australasia and a \$9.95 Internet Access pack at the newsagency, told *au.world* that the money is not going to come from making connections.

"Microsoft is absolutely right," he said, "the people who add value are the people who add content."

The battle for the hearts and minds of Australia's schools and business community is now in full swing.

Gerry Davis, the chief executive officer of On Australia, said that today's on-line services are a first step and a first experience of what an interactive service can be.

"The present opportunity is for business and the consumer to understand the applications for this network service," he said. "It gives them a taste of what will become available in the far richer more powerful systems as the bandwidth increases and the publishing tools become more powerful."

He raises the question of where the on-line service will fit in the average consumer budget.

"Does it compete with the entertainment or video hire dollar, the discretionary part of the budget; or will it compete with traditional shopping trips?" he asked.

"The challenge for the forerunners of this interactive experience is [to make sure that

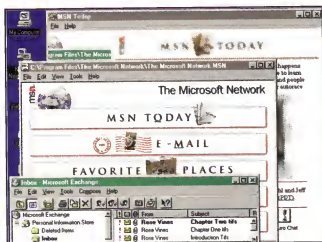
what] the consumers experience is enjoyable," he observes.

There is no doubt in Davis's mind that we are seeing the development of a consumer tool with significant implications.

"Local producers will find themselves more prone to global competition," he observed. "It will liberalise trade in financial services," he added, pointing out that a consumer who reads advertising for mortgages and financial services advertised globally, "is going to be pretty damn upset if national or regional laws prevent them using the service".

AusNet marketing manager Peter Setori is concerned that the





LEFT:
The Microsoft Network will deliver consumer goods including Microsoft products.

RIGHT:
CompuServe's interface is designed for functionality



game may be stacked. "It is of major concern that the government appears to have an expressed preference for Microsoft," he said.

He also echoed many other service providers' concerns about Telstra's role as the primary provider of connections to most of the Internet community; a 50% shareholder in On Australia, the company that administers the Microsoft Network locally; and as the administrator for the Internet in Australia.

All this political argy-bargy over the Internet belies the total size of the revolution. World Wide Web connections are only a fraction of total Internet business, which in turn is only a fraction of the overall telecommunications infrastructure. That includes commercial services, pay television and fundamental business connectivity.

Telstra has the infrastructure and momentum to be across all of them. Yet a number of organisations — obviously Optus, but also AAP — are beginning to chip away at the edifice.

While it may be unfortunate that one organisation controls so completely our access to the rest of the world, the only alternative solution on offer seems to be the construction of two national infrastructures side by side.

That this patently absurd idea has not been shot down in flames already is an indication of the desperation going into much of the debate.

Wisely, the Government is awaiting advice. In the meantime, the jockeys manoeuvre for position.

Education is one of the most contentious areas up for grabs. It was the Federal Department of Education Employment and Training (DEET) that moved early and seems to have taken the running in Canberra.

on-line

A number of initiatives that have started out to connect Australia's education system appear to have been put on hold while the politics are sorted out. OpenNet was set up as a result of the Creative Nation statement in November 1994 but has had its role redefined a number of times.

A national infrastructure project called EdNa was outlined early this year and was undergoing serious revamping at the time this article was written.

Many organisations, including Microsoft, have a great deal at stake riding on decisions to be made in Canberra this month.

One of the key players in this game will be the country's first Chief Information Officer, who had not taken up the job at the time of going to press.

The question of what role the Government has is somewhat vexed. Keating appears keen to have industry fund the development of the necessary infrastructure but this can make progress slow.

Australia as a nation currently has less access to the Internet than a single Canadian Internet Service Provider. This creates a government-induced bottleneck that seriously limits our involvement with the rest of the world.

The lack of government support for overcoming such macroscopic issues is seriously cramping development.

As well, the independent service providers appear to be tearing each other apart in a frenzy of local politics. The Internet Industry Association and the Australian Association of Commercial Internet Providers have practically mutually exclusive membership lists and are both suspicious of the Internet Society which they see as being too close to Telstra.

All service providers face a complex legal environment where they walk a fine line between adding value by massaging the content to which they provide access and inheriting legal responsibility for it as print publishers do.

"My concern is that Australia will miss the opportunity to take real leadership in an emerging technology in which it has all the right ingredients," said Microsoft's Meyer.

While a lot of marketing hype and frenzy of political infighting does not ensure a revolution, evidence is mounting that serious change is under way. *au.world* is committed to participate in this process and invites you, our readers, to join in. To have your say, visit our site at <http://www.idg.com.au/au.world>.

It happened on...

...the Net



Three-dimensional virtual reality in which you can move has been successfully demonstrated with the shoot 'em up game, Doom.

The rage on the 'net at the moment is 3-D meeting places where you talk to people instead of shooting them. Not quite the same adrenalin kick? Budding psychopaths will have to visit the mass murderers URL (see p14).

For the rest of us though, this is the beginning of an experience that until now has remained firmly planted in the realm of science fiction. World's Inc is working with Spielberg's Starbright, Intel and MCI to create an interactive fully featured virtual play space for seriously ill children in hospitals in the US.

The version of their technology available on the Internet <http://www.worlds.net> runs on Windows, and allows the user to visit a three-dimensional room and meet other people. The virtual you is defined by eight graphics that make up your 'avatar' and allow others to see where in the room you are and which way you are facing. Various graphics, movies and other sapes can be displayed or linked on the walls of the room. There is a mirror in which you can see yourself.

Stay in touch with the latest developments by visiting <http://www.idg.com.au/au.world>. — IAN EDWARDS

...the boards

au.world has been hanging round on the RipTerm bulletin boards collecting RipTerm welcoming screens for publication later in the year. This has uncovered a few interesting tales, given that everyone from family groups to heavy metal fans seem to have taken to RipTerm in a big way.

Story of the month has to be the one related by a sysop who works by day on a help desk. A woman rang to say that her new computer running the latest version of Windows did not respond properly to the foot pedal. After quizzing her about the model of the computer and what she had installed the "foot pedal" for, our informant realised that she had never used a mouse before. Seems she was more used to a Husqvarna than a PC.

To submit a screen, save the image as a bmp, tiff, or gif file and e-mail it to au.world@idg.com.au with the board's number, sysop's name and charges. Post disks to:
RipTerm,
au.world, Locked Bag 2750,
Nth Sydney, NSW 2055



...CompuServe

Compuserfers who have downloaded the Worlds Away demonstration over the last couple of months have had a good idea what to expect, but the publicity for this product threatens to mislead.

Billed as a virtual world in which people can meet as the personality of their choice, 'avatar', and then interact, most of the effort has gone into the graphics. Functionally this is like a very slow CB Simulator with pictures to look at while you wait. The demonstration version uses such trite examples one wonders about the people behind the project.

Their credentials actually seem impeccable, they have been involved in a number of projects involving virtual communities including the work of Lucas Film. Fujitsu and CompuServe are closely involved in this project. Tell us what you think on 100245,2253. — GEOFF EBBES

---MSN

With the network in test mode au.world's ramblings have been interrupted from time to time by messages saying that the network would be going down and that we had to be off by a certain time.

People in the "chat rooms" would start counting down and saying goodnight to each other as "lights out" approached.

One night a brave character decided to stay on as long as he could.

Next day he told his Cyberbuddies how he had wandered around an increasingly empty network, bumping into Microsoffers and running away. The next time a group of us decided to try hanging around in this Cyber

non-space as long as we could.

It was quite fun wandering around in the blank universe that is a network without content gradually losing contact with people from around the world as different parts of the network went down.

e-mail: auworld@msn.com

Kewl

"Kewl dudes don't sweat, excitement's for kids... We hang out places people just look at and like say, 'Weird, Why hang out there?'"

<http://entity.vuse.vanderbilt.edu/project/>

The Restroom Utilisation Monitoring Project provides statistics about the bums on seats in the computer science toilets at Vanderbilt University. There's a sting in the tail for those who use what an Aussie would call ToiletCam.

<http://www.aopa.com.au/weather/wthr.html> Why get your weather like everyone else if you can get it from the place that airline pilots go? The kewlest dudes talk windspeed, freezing level and turbulence.

<http://www.infobahn.com/pages/rito.html> For those who wish to combine a love of US culture with a taste of superstition, this is the place to read your fortune based on your taste in burritos. For those who don't know what a burrito is, Get Kewl.



<http://www.optics.rochester.edu:8080/users/pgreene/faq/gallery-thumbs.html>

Not kewl as such, this page became the unsuspecting basis for a cyber generated subcult. Feral Sherryl and the rest of the new age techno-hippies got into carnivores via this petlover's paradise. Feral is no-mode, Go Ferret!

<http://www.payment.com/exchanges/exchanges.html> The page for the Internaut with megabucks. Drool over the millions that other people have. Or move your own around.

Bizarre

<http://underground.net/Art/Crime/archives.html> Billed as "The digital home of the mass-murdering serial killer", this over-the-top site is about as lurid as the average *Sex Crimes of the Century* book available in your average shopping mall.

It uses lots of tricks that are proposed for the HTML 3.0 standard to maximise its impact and, needless to say, a lot of blood and guts. If you find Doom disgusting, don't visit this site. Interested? We'll let the rave from the page speak for itself. This is from the list of choices to those who visit.



Imagemap of Death

Enjoy our candid Group Portrait of Evil. Look for your favourite psycho and find out why he or she really turns you on. Are they deranged sociopaths with twisted oedipal issues? Or just another bunch of unhappy postal workers? They tried it, they liked it, they did it again!

Hot

Need an on-line service to jazz up life?

Hanging out for Roseanne in AbFab?

Hang here, these places are Hot.



<http://www.cco.caltech.edu/~ayhan/bosnia.html>

Not much joy here. The world's hottest political spot continues to fall apart around the ears of Ayhan... who has put this page together to keep the world informed.

<http://www.csv.warwick.ac.uk/~esrlj/Uma/index.html>

Pulp Fiction, *Vanity Fair*... a showcase of the tall thin lady in a variety of poses and places. Lots of links to the whole world of celebs.

<http://www.jpl.nasa.gov/news/> When these mothers fire up their engines, *Towering Inferno* looks like a model in a movie studio. There is enough energy here to put a laboratory in space. The latest news from NASA, with lots of hot space pics.

http://www.hitl.washington.edu/projects/knowledge_base/onthenet.html

A pretty *gauche* guide to the hottest area of development right now — Virtual Reality. Not everyone's cup of tea but if you haint seen the stuff it points to you haint hip.

<http://www.pathfinder.com/@w949M>

QAAAAAADkE/vibe/vibestyle/vibestyle.html One of the Time Warner magazines on-line, *Vibe* covers music and the arts. This is their style page. Trends, looks, the people who matter. Lots of links.

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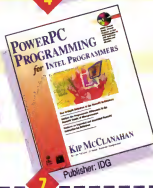
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TIPS OF THE MONTH

Finding components in Delphi

TIP Borland Delphi for Windows 1.0 has a configurable development environment. Features include a configurable component palette that allows you to move the current components or add new ones.

One of the problems can be finding the components that you have moved or installed. A simple way to find components by object is to select *View-Components*.

Scrolling problems in Word 6.0

TIP Word 6.0 is very slow while scrolling through documents with more than 50 pages — it can take up to 30 seconds. The simplest solution to this problem is to select all of the text (*Select-All*), and *Copy and Paste* it into a new document. Save the new document and work on it — the performance problem has gone away. Word's Fast Save feature creates a very fragmented document file, which causes the performance problem.

Charting option for Word

TIP Use Excel to create your charts, and import them into Word using *Paste Special As Picture*. Now you can edit the chart as if it were a picture. The charts look more professional than those created using Graph, but they take up more space.

Watermarks in Word 6.0

Q How do I create a watermark of the word "Draft", diagonally across the page in WinWord 6.0?

A You would need to follow the usual steps of creating a watermark and use WordArt 2.0 to rotate the word. The steps to follow are:

1. From the View menu, choose *Header and Footer*.
2. On the Header and Footer toolbar, click the *Show/Hide Document* text button.
3. On the Drawing toolbar, click the text box button and insert the text box and drag it out to cover the full page.
4. From the Insert menu, select *Object* and choose *WordArt 2.0*.
5. In WordArt, type the word "Draft" in the text box.
6. Click the rotating button to rotate the word, then click OK.
7. Click outside the text box to take you back to Word.

8. Select the Line style button on the Drawing toolbar and choose *None* to hide the text box.

9. On the drawing toolbar, click the *Send Behind Text* button.

10. Click the *Close* button on the Header and Footer toolbar.

Changing object properties in Delphi

TIP Select any object in design mode of a form. Select *Edit-Cut* and the object properties are placed in the Windows Clipboard. Now you can paste them into any text editor, change the properties values, copy them back to the Windows clipboard and then paste the new object back into your form.

Locking a NetWare 4.1 server console from the monitor

TIP NetWare 4.1 can lock the Server console from the MONITOR.NLM utility. It allows you to enter a password which is just <Return>. The only way to unlock the console if you do this is to use the Bindery object Supervisor's password, or the password that was used when the server was installed. This may not be the current NetWare 4.1 NDS Object Admin's password.

If you don't know either of these passwords, login as Admin (if it still exists) and use SETPASS SUPERVISOR from the prompt to change it to something else. This can then be used to unlock the console.

If this is not an option, the only recovery step is to powerdown the server (a bad thing to do) and then run DSREPAIR and VREPAIR.

Secret screens in dBase for Windows

TIP Most Windows software has secret screens coded into it and dBase for Windows is no exception. dBase for Windows has four secret screens that contain animation and credits to everyone involved in its development.

To access them, choose *Help-About dBase for Windows*. Then do one of the following four keystroke combinations while holding down the <Alt> key:

1. Type *i*.
2. Type *fo*.
3. Type *campus*.
4. Type 28. ■

Multimedia base rises again

What does the 'standard' multimedia PC of tomorrow look like?

Now that Windows 95 is finally here we'll get to see if the predictions are true. Will it mean the scrap heap for lots of otherwise good machines, simply not good enough to run the new operating system? And if it does, just what will the new standard for multimedia PCs be?

The first truth is that a lot of people will move to Windows 95. The second truth is that this *does* mean a reasonably high system specification, at least as high as the current multimedia machines being sold. What will be interesting is to see exactly how the "standard" multimedia PC changes over the next few months as manufacturers learn more about the requirements of Windows 95 (and its owners).

Processor

Although this may surprise you, processor type is not the most important feature. The current rush is to faster and faster Pentium chips, starting at the 75MHz model. AMD makes a range of fast 486 chips, and says you should consider these instead of a Pentium. The company claims that its new 486DX4-120 chip is faster than most Pentiums, and machines built with it will cost \$1,000 less than an equivalent Pentium. While this figure might be a bit exaggerated, the concept is reasonable. The motherboards and chips for 486s cost less than Pentiums, and the end result is the same performance. AMD is also planning a 150MHz 486 for the end of the year, so reports of the death of the 486 are still a bit premature.

Of course, with any computer purchase you have to buy a bit ahead of what you think you need, otherwise your machine will be obsolete in just four weeks instead of eight. And that isn't as silly a joke as it might seem, as models are being replaced at a frightening rate. You

should certainly be buying a minimum of 486DX2-100 or Pentium 75 for Win95.

RAM

I hate to contradict Microsoft, but if you have a 386 chip, this new operating system isn't for you. Likewise with RAM — 4Mb simply isn't enough. There's a big difference between an operating system working and it being able to do any work.

Eight megabytes is a minimum and 16Mb is good. The computer manufacturers we contacted said they will continue to make 8Mb the standard on multimedia machines, but will suggest to dealers that they "upsell" to 16Mb if they think the buyer needs it.

"This industry is too price competitive to make that sort of thing standard. For 16Mb to be standard our competitors would have to do it too!" explained AST marketing manager, Darren Besgrove.

Hard disk

If you think processor speeds are going through the roof, take a look at what people consider is an acceptable hard disk size. We're only just hitting 540Mb as standard, and the manufacturers say that by Christmas it'll be 850Mb or 1Gb or even higher.

Not that I'm complaining, as I'm yet to be convinced that using a disk doubler with Win95 is a good idea — on beta test copies it seems to slow performance markedly.

Hard disk space in gigabytes will be standard by the end of next year. Even so we'll have to use discretion in loading our systems as it will be all too easy to fill any sized disk. Every piece of freebie software seems to cry out "Yes, I know I'm useless but let me fill your disk with files and programs you'll never use again." Thank goodness Microsoft insists on an uninstall procedure for all approved Win95 applications.

Multimedia

The quad-speed CD-ROM drive is already standard and we probably won't see any changes there for a while, although some manufacturers are starting to offer six-times drives. Likewise,

the 16-bit sound card is standard, and for most people there isn't a good reason to go to professional wave-table cards.

There'll be a big move to movies on CD over the next year, so eventually multimedia PCs will come with MPEG video cards, or the equivalent, on the motherboard. But until that only adds \$100 or so, they won't become standard. Of course some people will also tell you they can do the MPEG decompression in software — I'll wait till they show me that little trick!

MPEG is a way of compressing video frames so that they can be decompressed as the video is being shown. Because it's a "lossy" system, the resulting picture is less than perfect, but stores in a fraction of the space — as low as a few per cent.

Software

Multimedia PCs already come bundled with a wide range of software, mostly on CD. There's a possibility that we'll see a lot more bundled, simply because the software manufacturers make it available to the PC manufacturers almost free. The rationale is that if you like the software you get, you might go and buy the same brand later. And when it's something like a "Works" package, you'll eventually want a full "Office" package, presumably from the same manufacturer. Some observers even feel that PCs may start to ship with more than one brand of each type of software, so you get more choice.

Hopefully we'll soon see the one missing component of software bundled with PCs — Australian products. While we're still waiting for an Australian multimedia encyclopaedia, there are some good specialised titles which could be used. Unfortunately, the US titles are extremely cheap.

Case

We seem to have gone through a couple of cycles of case type. While the mini-tower is coming back into favour with some manufacturers, others will stick with the horizontal-format case for one very good reason: speakers. The typical small speaker boxes that glue on the side of the monitor are unsightly, tinny and a nuisance. Much better to have the speakers and a proper amplifier built into the PC case, or even the monitor — and that's just what we'll start to see.

The other reason for a

simpler case style is that there'll be less to cram into it. More and more functions are moving onto the motherboard, and hard disks can be tucked into a spare corner. While only a 3½-in disk drive is needed, this will quite possibly be a dual-medium drive soon, also accepting a high-capacity diskette of more than 100Mb capacity. And with CD drive prices continuing to drop, expect two CD drives to be semi-standard soon. In fact, expect to see optional multi-disk drives that hold up to 10 CDs at a time.

Price

Typical multimedia machines continue to start at around \$3,000, yet AST's Besgrove believes the demand for higher specifications will outstrip the natural drop in prices. He thinks that \$3,500 will be the starting point for machines on sale this Christmas, with \$4,500 being a more typical system.

Michael Ortega from Beyond Computers thinks market forces will continue to keep prices down. "Now that Osborne is out of the picture for a while, those extra people will be out looking for other brands. But they won't want to pay any higher for their machines, and for any dealer to get their business, [the dealer will] still have to be very price competitive," he explained.

No, I haven't said if I think hundreds of thousands of PCs will be thrown on the scrap heap because of Windows 95. Only time will answer that. In the meantime, they make nice desk clocks, don't they?

— Paul Zucker



By Christmas you can expect standard multimedia PCs to have a Pentium chip, Windows 95, and a 850Mb or larger hard disk, but still come with 8Mb of RAM and a quad-speed CD-ROM drive

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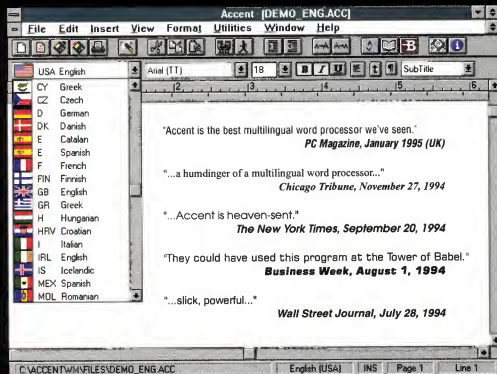
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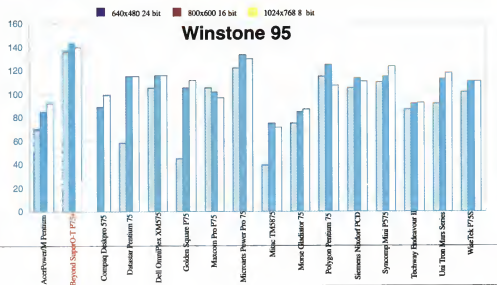
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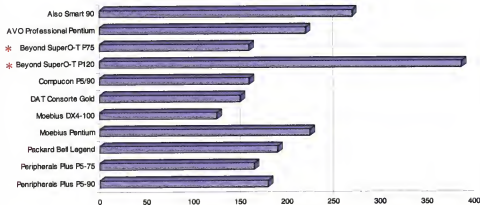
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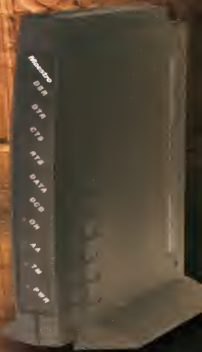
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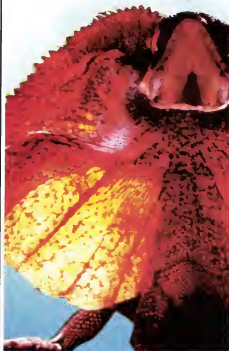
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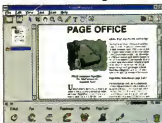


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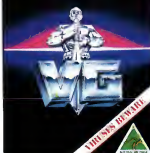
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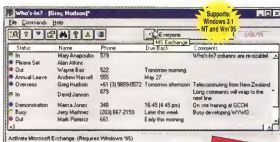
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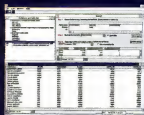
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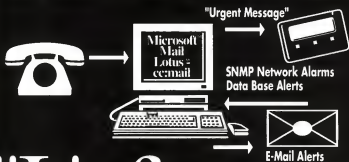
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Brains and brawn

"A day when all life will be cleaner, more logical and straightforward." Rather than a nifty slogan for the next federal election, this is the philosophy of the Mondites, a shady cult that has taken control of the Daedalus Archaeology Base. Because the Mondites believe machines are better than animals, a certain Dr Mastaba is performing cybernetic and genetic manipulation experiments on whoever he can grab.

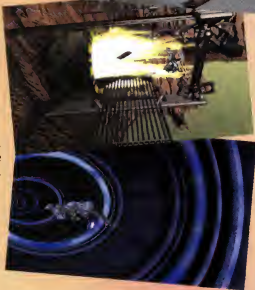
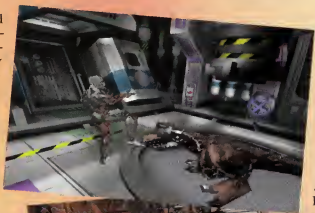
Which is where you slide in, literally, under the blade of Dr Mastaba's buzz-saw in the game's opening sequence.

Bioforge begins as you awake after surgery in your cell — you're a medically altered cyborg, with no memory, and looking a lot like Arnold from the *Terminator* movies. How did you get involved in these heinous experiments? How can you stop these crimes? Who are you, or who were you? These are the puzzles — and the action — of Bioforge.

This DOS game is something of a hybrid. Bioforge is part puzzle-solving, à la *Myst*, and part raw combat, à la *Mortal Kombat*. For example, it's not enough to defeat the mutant raptor creature in the cryogenic room: you then have to think how you'll use its carcass to beat the scorpion creature downstairs.

The puzzles are tricky without being torturous. To solve them you'll need commonsense and the objects you find along the way, including a fork, a severed arm and a flute. The logbooks are especially important — read everything you find.

If you are not used to combat games, the battles against guards, marines, aliens and robots take some practice. Bioforge offers three levels of combat game play: I suggest starting on Easy until you get the hang of the different manoeuvres, before switching to Normal or Hard. The Normal and Hard settings are designed so the



same combat move is less effective if used twice in a row, and the Hard setting gives your opponent the advantage in each contest. Combat is controlled from the keypad, with the upper keys initiating head-high manoeuvres, the side keys controlling torso-level blows, and the lower keys for waist-level attacks.

My only disappointment with Bioforge is the graphics, which are fully-rendered but not eye-popping. The game plays at standard VGA, with no option for anything less than full-screen play. Your character and the creatures you fight appear quite "pixelly", so don't expect a *Myst*-like environment. Then again, the action in this game means there's not a lot of

time to stop and admire the scenery.

In the current world of serious game programming, Bioforge has been created with the System for Animating Lifelike Synthetic Actors (SALSA), designed to "evoke deeper reactions from game players" than your average CD game. SALSA might explain why my cyborg character uttered heartfelt assertions like "I have no wish to harm you" as I made it execute repeated kicks to the head of my one-armed opponent.

Bioforge has a good system for saving games, including an automatic return to the last saved position when you restart, bypassing the game's opening sequence entirely.

Bioforge requires at least a 50MHz 486, 8Mb of RAM and a twin-speed CD drive. A Pentium with 16Mb of RAM is recommended. It plays under 256-colour VGA, and is compatible with the MPU-401 General MIDI standard in some of the Roland sound cards, as well as the more common Sound Blaster and Adlib boards. Bioforge comes with a small user guide, and whole manual devoted to installation and troubleshooting. The manual suggests creating a boot disk to avoid memory problems (you'll need at least 420K of base memory).

For those with on-line access, Bioforge's creator, Origin, has a forum on CompuServe (GO GAMAPUB), or you can log onto Origin's anonymous FTP site at ftp.ea.com for demos, patches and screen shots. Origin also has a Web page at <http://www.ea.com/origin.html>.

The plot of Bioforge is interesting enough to make you want to hunt down your surgically-altered identity, and challenging enough to mean it will take awhile. Bioforge is distributed by Electronic Arts and lists for \$99.95.

— Mark Stafford

CHEATS & TIPS

Doom II

Play dirty with Doom II's cheat codes. Type the following codes while playing:

idkfa: Gives you all the keys and weapons, plus extra ammo and armour.

idclip: Walk through walls.

iddqd: God mode — you can't be hurt, except by the Arch-Vile.

idmt: Displays the entire level when viewing the Automap.

Type it again to see all the creatures and secrets.

idbehold plus one of these letters:

v: 30 seconds of invulnerability

i: 60 seconds of invisibility

s: berserk mode!

r: immunity to toxic waste

a: display the entire map for a level

l: 120 seconds of light-amplification goggles

TIP: The Arch-Vile is the nastiest new nasty in Doom II — even God mode won't help you. He (we'll assume it's male) will appear in the east quadrant of Level 11, in a room up some stairs patrolled by a couple of Imps. He'll come for you as soon as you enter, so step in but then retreat quickly to the stairs around the corner. Sidestep up and fire your BFG — one well-aimed shot should do it.

gameART



Desert transport of the future, as depicted in *Loadstar: The Legend of Tully Bodine*, developed by Rocket Science

Feel free to send in your favourite game screen grab with your name and a note to say where it comes from. We'll pick one for publication each month. E-mail to Mark_Stafford@idg.com.au, or send a disk to "Gameart" at PC World's normal address.

BETAS

Due out this month is *Crusader: Na Remorse* from Origin Systems, the same mob that brought you *Wing Commander*, *Wings of Glory* and this month's review game, *Bioforge*.

In *Crusader* you're the dude in the snazzy red body armour, and you and the huge chip on your shoulder have just defected from the Consortium. Now you fight for the rebel forces as you are sent on mission after mission through laboratories, offices, refineries and military bases. You walk, run, jump, crouch and hide to engage and ambush your enemies, who each have a different combat style. You can also choose your own fighting style — of key points in the game you can think your way through puzzles, or decide to simply load up and blast away.

Crusader comes on CD and is interspersed with live-action video. You'll probably need 6MB of RAM and at least a 486-50 to play this one.



Trust me, I'm on the radio

It's scary how much trouble people can get themselves into talking about things they don't understand. Backbytes listened to a 20-minute ABC Radio segment about telecommunications services recently. The interviewee was upset because deregulation in the communications industry had just been announced, but it "would only help those people in the cities!"

He complained that while city people were getting all these new services, Telstra would never do anything for country people such as give them fax or modem services like the city people had. The interviewer "Hm'm'd" knowingly, and they proceeded to take lots of calls from listeners who also thought this was terrible.

Eventually one caller asked if the interviewee had ever connected a fax machine or modem in his life. No, he hadn't, but what difference did that make, he asked. Red faces all around when the caller gave a quick lesson explaining that modems and fax machines use standard telephone lines and not anything special at all!

Tosh to toss trouser toppers?

Is the stalwart of portable computers about to admit defeat and start selling desktop machines after all these years? Toshiba Australia has always made a point of only selling portable machines, explaining that they did everything a user needed. That was alright while Toshiba held a respectable slice of the market, but the honeymoon may be over. A number of manufacturers such as IBM and Compaq have been snapping at Big T's heels for a while now, and IBM has finally taken lead spot in the US with its excellent ThinkPad range. Rumours are that a desktop range sporting the "Toshiba" tag is on the way.

The leased said, the better

Have you noticed how quickly new versions of some software come out? They aren't always amazingly new — just a few new features — but they still cost money to upgrade, and if you miss a couple of versions you might have to buy a full pack when you do want to upgrade. It's almost as if you were leasing the software!

They say IBM bought Lotus because . . .

- Lotus was the only major developer left doing OS/2 applications.
- IBM boss Lou Gerstner told his secretary to "take notes", so she went out and bought the company for him.
- They thought they were buying a sportscar manufacturer.
- Bill Gates said to Lou Gerstner, "Go on, I dare you to!"
- It was the only way of getting enough copies of Windows 95 without having to buy them under the IBM name.

And for those readers who thought Microsoft was going to make its fortune selling Windows 95, think about this. Company insiders say the marketing people expect to sell 70 million upgrades of Microsoft products over the next six months alone. That's going to be worth around . . . SEVEN BILLION DOLLARS!

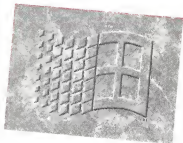
Did you hear that . . .

- 30,000 brand new Apple Newton MessagePad 100 PDAs were crushed into the ground in Los Angeles as landfill recently. Not the first time Apple has done this either, as a lot of Apple IIGS machines gave up their lives for parking lots too.
- Navell has been asking users if they really need Mac support in future versions of NetWare.
- People using the Linux operating system may not have all security they require. The system is so compact it can boot from a diskette, allowing the user to access all system files, including the HPFS files used by network systems such as Windows NT. And if you boot the machine with a modem connected, you can get access to the network — inside the firewall!
- Windows 95 does not support Unicode, Microsoft's "solution to the world's communication problems", and Bill Gates is "not very happy".
- Users of many so-called secure systems lose their security simply by walking away from the machines without logging off. As one person said about auto-flushing urinals, "They're smarter than most computers because they notice when you walk away."

95 rumours

Microsoft hasn't had everything go well with the Windows 95 launch. The rumourmongers have been busy with a mixture of fact, fiction and pure fantasy. The one about Windows 95 spying on your system and reporting everything to Microsoft at registration time was getting airplay right up until launch date, despite repeated Microsoft denials.

Then there was the one that said the product would ship with a dongle so only legitimate copies could be booted. And the one that said the entire production run had been trashed because Microsoft was forced to take the Microsoft Network software out. But the best one we heard (and this was on the radio, too) was that if you tried to install it on a 286 or a 386SX machine it would "blow the fuse in the processor" destroying the computer. ■



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